UNIVERSITY OF HAWAI'I LIBRARY

SELF-MANAGEMENT BY UNINSURED FILIPINO IMMIGRANTS
WITH TYPE 2 DIABETES

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAI'I IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

NURSING

By

Anne Reynolds Leake

Dissertation Committee:

Jillian Inouye, Chairperson
Amefil Agbayani
Dianne N. Ishida
Patricia W. Nishimoto
Chen-Yen Wang
Charles W. Mueller
ABSTRACT

Filipino Americans have a higher prevalence of type 2 diabetes than the national average. Good self-management (SM) of diabetes is required for good outcomes. Uninsured Filipino immigrants face cultural and financial barriers to good outcomes. The purpose of this study was to describe self-management by uninsured Filipino immigrants with type 2 diabetes. Results from the study will reduce the risks of complications by improving self-management education. Qualitative research on diabetes self-management [SM] and research on Filipinos and health were reviewed. Concept analysis of SM using the Wilsonian method (Wilson, 1963) produced eight essential elements.

An applied ethnography was conducted with 11 participant interviews and 100 hours of field observation over 10 months. Participants were two men and nine women, ages 57 to 74, attending a free diabetes clinic in federally funded community health center in urban Hawai’i. The explanatory model [EM] (Kleinman, 1980) and a model for health disparities (Cooper, 2002), guided the study. Purposive sampling achieved a range of participants across factors of age, recent HgbA1c, years with diabetes, and years in Hawai’i. An inquiry audit by an external expert was done.

Significant statements coded into four domains of barriers, the explanatory model, family and self-management behavior. Participants’ EMs combined Western and naturalistic explanations, including avoiding a hot climate and use of local plants (bittermelon and noni) recommended by other Filipinos. All participants exercised and most used SM strategies of control and moderation. Four cultural themes were induced from the data: 1.) rice is more than just a starch; 2.) worry is a Filipino pastime; 3.) advice is a gift freely given and received; and 4.) the family is everything.

Participants demonstrated five of the essential elements of SM but did not do as well with consulting health care team, problem solving and increasing self-efficacy. The family’s group efficacy, as much as self-efficacy, influenced behavior change. Participants’ SM compared favorably to other populations for behavioral change, emotional distress and support from family and friends. Implications for clinical practice were emphasis on group efficacy and reducing barriers to medical consultation. Further research to explore the concept of worry was recommended.
# TABLE OF CONTENTS

Abstract .......................................................................................................................... iii
List of Tables ...................................................................................................................... vi
List of Figures .................................................................................................................... vii
Chapter 1: Background and Significance ........................................................................ 1
  Background ...................................................................................................................... 1
  Statement of the Problem .............................................................................................. 5
  Purpose of the Study ...................................................................................................... 6
  Significance of the Study ............................................................................................... 6
Chapter 2: Literature Review ............................................................................................ 9
Chapter 3: Concept Analysis of Self-management ........................................................... 22
  Model Cases .................................................................................................................. 30
  Contrary Cases ............................................................................................................. 32
  Related Cases .............................................................................................................. 34
  Borderline Cases ......................................................................................................... 35
Chapter 4: Methodology .................................................................................................. 42
  Conceptual Orientations ............................................................................................... 42
  Design and Method ....................................................................................................... 43
  Sample and Setting ...................................................................................................... 46
  Data Collection ............................................................................................................ 48
  Data Analysis .............................................................................................................. 52
  Limitations ................................................................................................................... 53
Chapter 5: Findings .......................................................................................................... 56
  Field Observations ....................................................................................................... 56
  Quantitative Data ......................................................................................................... 70
  Qualitative Data .......................................................................................................... 71
  The Domain of Barriers ............................................................................................... 71
<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eastern and Western Values</td>
<td>215</td>
</tr>
<tr>
<td>2. Self-management of Type 2 Diabetes</td>
<td>216</td>
</tr>
<tr>
<td>3. Studies of Filipinos Related to Health and Migration</td>
<td>226</td>
</tr>
<tr>
<td>4. Factors for Purposive Sampling</td>
<td>229</td>
</tr>
<tr>
<td>5. Quantitative Data for Participants</td>
<td>230</td>
</tr>
<tr>
<td>6. Rank Ordering of Participants by Hgba1c and Ratio of Positive to Negative Emotional Statements During Interview</td>
<td>231</td>
</tr>
<tr>
<td>7. Factors Influencing Self-management Behaviors</td>
<td>232</td>
</tr>
<tr>
<td>8. Domains and Categories with Code Counts</td>
<td>233</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Model of Health Disparities</td>
<td>235</td>
</tr>
</tbody>
</table>
CHAPTER ONE: BACKGROUND AND SIGNIFICANCE

Background

Recent Filipino immigrants have faced more barriers to obtaining health services since 1996 with welfare reform at the federal level. Filipinos have become the second largest group of immigrants to the U.S. to date after Mexicans (Bonus, 2000). In their *White Paper on the Health Status of Filipino Americans and Recommendations for Research*, dela Cruz et al. (2002) searched the literature in Medline and CINAHL in each of the 28 focus areas for *Healthy People 2010*. Focus areas were far reaching and included specific illnesses (e.g. cancer, chronic kidney disease, diabetes), population subsets (e.g. maternal/child health, occupational safety), and risk factors (e.g. physical activity and fitness, tobacco use). Only 48 studies were found, which focused primarily on cancer and mental health. There were five studies relating to cardiovascular disease and stroke, with Filipino Americans having the highest rates of hypertension compared to other Asian and Pacific Islanders (AAPIs) (Klatsky, 1991; Klatsky, 1995) and with rates close to those for African-Americans.

Type 2 diabetes has been a common problem for Filipino Americans with serious complications if inadequately treated. The Filipina Women’s Health Study was conducted to measure the rates of diabetes, heart disease, hypertension and osteoporosis among 454 Filipinas ages 50 and older in San Diego County (Araneta, 2002). One in three Filipinas had diabetes, compared to one in 11 Caucasian women. Of those Filipinas with diabetes, 90% were not obese, and 60% did not know they had diabetes. Little is
known about how Filipinos take care of their diabetes. Only two studies from the literature reviewed in the White Paper were about diabetes, and both of those related to gestational diabetes. DelaCruz et al. (2002) concluded that the paucity of information about the health problems of Filipinos was a barrier to the design of culturally appropriate interventions to promote health behaviors.

Forty years ago, Sloan found an age-adjusted prevalence of diabetes for Filipinos living in Hawai`i to be three times that for whites (Sloan, 1963). In Hawai`i, preliminary results of the Native Hawaiian Health Survey show a 12% prevalence rate of type 2 diabetes for Filipinos, about twice the national average (Tom, 2001). In the 2000 State of Hawaii Behavioral Risk Factor Surveillance System (BRFSS), 6.0% of the 295 Filipinos surveyed had been told by a doctor that they had diabetes (Hawaii DOH, 2000). This prevalence exceeded the state average of 5.2% for all ethnic groups surveyed in the 2000 BRFSS and surpassed all ethnic groups except Japanese at 8.6%. The different prevalence levels reported in these three surveys methods revealed the lack of knowledge about prevalence of diabetes for Filipinos in Hawai`i.

The complications of type 2 diabetes (nephropathy, neuropathy, cardiovascular disease, and retinopathy) have been the contributors to morbidity and mortality. Filipinos with diabetes were less likely to have received an eye exam with dilated pupils during the past year at a rate of only 68.8% for Filipinos vs. the 81.0% state average (Hawaii DOH, 2000). Filipinos were also less likely to have taken a class in managing diabetes at a rate of 40.5% for Filipinos vs. the 45.9% state average (Hawaii DOH, 2000). With already higher prevalence of hypertension among Filipinos (NHLBI, 2000), good control of
diabetes is essential to preventing complications. Self-management of diabetes is the cornerstone of good control (Glasgow et al., 1999; Norris, Englegau, & Narayan, 2001).

**Immigration and Welfare Reform**

The 1990 Immigration Act doubled the 1965 employment quota for Filipinos possessing needed job skills in the U.S. and has facilitated bringing in spouses and children of permanent immigrants (Posadas, 1999). Many older Filipinos also immigrated under exempt, family-sponsored preferences following their adult children to become surrogate parents and homemakers for their grandchildren to allow both parents to work (McBride, 1996). With federal welfare reform, immigrants entering the U.S. after August 22, 1996 were no longer eligible to enroll in Medicaid or to qualify for Supplemental Security Income (S.S.I.) and its associated Medicare coverage until they have accrued five years of residency. Sponsors of immigrants became responsible for the immigrant's medical bills.

With a strong desire for family reunification (Abenoja, 1997), Filipinos strive to remain debt-free and to maintain a strong credit rating to be able to petition their relatives to come to the U.S. (Personal communication with Marissa delaCruz, R.N., 2002). Uninsured Filipino immigrants in need of medical services may be able to access low-cost services at community health centers across the U.S. Federally qualified health centers have charged patients according to a sliding fee scale and have been able to write off bad debt because of federal, state, or private funding. However, patients still receive bills which could eventually go to a collection agency. Fear of debt has been a particular barrier to accessing health services for uninsured Filipino immigrants.
Disparities in Health Care for Minority Populations

The Institute of Medicine’s Committee on Monitoring Access to Personal Health Services published a model to detect access problems (IOM, 1993). This early model defined access as “the timely use of personal health services to achieve the best possible health outcomes.” Subsequent authors have looked at other ways of looking at access for vulnerable groups (Bierman et al., 1998; Cooper et al., 2002).

Subsequent models went beyond looking only at access to try to explain disparities in health outcomes. Included were problems with access to the system as well as within the system, and the ability of the provider to address patients’ needs were included. Additional personal barriers have been considered to include the involvement of family members, patient preferences for treatment and involvement in decision making, personal health habits, beliefs about health and disease, and health literacy. To adequately address the complex issue of disparities in outcomes, more knowledge about barriers and patients’ views about their care is needed.

Filipino Health Beliefs

Health for Filipinos has been described as a matter of balance and moderation (Cantos & Rivera, 1996; Miranda et al., 1998; Vance, 1999). Imbalances are caused by personal irresponsibility. Responsibility and a clear conscience are keys to good health. Health is associated with good food, freedom from pain, and strength. Being overweight is a sign of wealth and contentment rather than a risk factor for diabetes and cardiovascular disease. The four causal models of illness described were punishment of
bad behavior; the four humors (phlegm, air, bile, and blood) and *mal aire*; supernatural powers; and natural causes (Miranda et al., 1998).

The treatment preference and perceived disease pattern would depend upon the causal model held by an individual. Punishment of bad behavior would be treated by correcting the evil deed. Illness would be prevented by avoiding inappropriate behavior and cured by restoring balance. For believers of *mal aire* and the theory of the four humors, treatment preference would be flushing, heating, and protection. Vinegar commonly would be used to promote flushing, while Western medicine was shunned if viewed as too strong and upsetting to the balance in the body.

Supernatural powers could include angry ancestors, witches, the evil eye, or a bite from an animal. Treatment preferences for this causal model would include talismans, amulets, prayer, and folk healers such as a *hilot*, *albularyo*, or *curanderos*. Prayer would be used to maintain health. Believing that illness is the will of God, some Filipinos would suffer in silence. Natural causes of illness were considered overeating, poor diet, and excessive drinking. Treatment preferences would include home remedies such as herbal preparations, massage, sleep, and exercise. Perceived disease patterns in this causal model were increased fat and sodium intake, and decreased physical activity with an urban lifestyle and higher economic status.

**Statement of the Problem**

Little is known about how Filipino immigrants self-manage their diabetes. The goals of self-management are to maintain or improve health status and reduce risks of developing complications from diabetes. Since people with type 2 diabetes have are
often relatively asymptomatic, they may not know how they are doing with their diabetes without regular monitoring and screening for complications. Poor self-management coupled with lack of access to services and medication increase the chance of complications from diabetes. In 1994, Filipinos in Hawai'i were over-represented in the dialysis population relative to their percentage of the total population at 22% vs. 15% (TransPacific Renal Network, 1994). Subsequent annual reporting for Hawaii's Network 17 has been compiled into a national report where Asians and Pacific Islanders were lumped together (TransPacific Renal Network, 2001). Fifty-two percent of patients on dialysis in Hawai'i have diabetes, higher than the national average but down from 60% in 1994. Among Filipinos taking medicine to control blood pressure in California, only 16% were controlled compared to 40% of the population overall (Stavig et al., 1988).

Purpose of the Study

The purpose of this study is to describe how uninsured Filipinos self-manage their type 2 diabetes.

Research Question

How do uninsured Filipino immigrants who have type 2 diabetes self-manage?

Significance of the Study

Knowing how uninsured Filipino immigrants self-manage their type 2 diabetes will allow health care providers to design and implement more effective educational interventions and provide services more suited to patient needs. Reducing the risks of
complications from diabetes for this group will reduce the burden of the disease on their families. The immigrant’s sponsor is financially responsible for the medical bills of the person whom they have petitioned. This fear of incurring a huge debt on their sponsor has deterred many immigrants from seeking emergency care.

Knowledge from this study may help to reduce disparities in outcomes for different populations. Healthy People 2010 proposed to “eliminate health disparities” as one of its two primary goals for the next decade (HHS, 2000). Diabetes was one of the focus areas for this initiative. Unfortunately, none of the 17 objectives for diabetes had baseline measures for Asians and Pacific Islanders.

In 2000, socioeconomic status of women with diabetes was markedly lower than that of women without diabetes (Centers for Disease Control, 2002). Diabetes prevalence was more strongly associated with poverty income ratio than with education or occupational status (Robbins et al., 2001). Three recent reports based on Commonwealth Fund-supported research provided fresh evidence of racial gaps in health care. The Fund’s 2001 Health Care Quality Survey found that African Americans, Asian Americans, and Hispanics were more likely than whites to have difficulty communicating with their physician, to feel like they are treated with disrespect, to have barriers to access such as lack of insurance or no regular doctor, and to feel they would get better care if they were of a different ethnicity (Collins et al., 2002). The Institute of Medicine’s recent report provided broad and compelling evidence of racial and ethnic inequalities in health care, access, treatment and outcomes (IOM, 2002). This report found that minorities received lower quality of care even when accounting for differences in age, income, insurance status, and health status. The report suggested that bias and stereotyping, as
well as language barriers, played a role.

Even if recent Filipino immigrants lack insurance, by law they cannot be refused service at emergency rooms for life-threatening problems such as cardiovascular events or diabetic ketoacidosis. Primary care, which might have prevented the need for emergency care, may be viewed as a luxury in the face of competing needs. Understanding how uninsured Filipinos with diabetes self-manage may contribute to reducing the costs of care for this group through community-based interventions.

In summary, financial barriers to health care services for immigrants have increased since 1996. The prevalence of type 2 diabetes for Filipinos in Hawai‘i has been shown to be higher than for the white population and higher than the state's prevalence for the total population. Good self-management has been shown to be the cornerstone for good diabetes management, yet there have been no studies about self-management by Filipinos with diabetes. Any initial study of this area would need to be a qualitative study since quantitative tools to measure self-management behaviors have not been tested in this population. A review of the literature for qualitative studies of self-management in different populations was conducted to learn from those methods and findings. Studies about Filipino health relevant to self-management were also reviewed. The findings from these two literature reviews are presented in Chapter 2.
CHAPTER 2: LITERATURE REVIEW

Literature pertaining both to diabetes self-management and to Filipino health was reviewed. The first literature search from 1994 to March, 2003 was done in OVID citing only peer-reviewed journals. The databases ClinPsych, CINAHL, EBM, HaPI, and Medline were searched to include medical, nursing, and psychology perspectives on self-management. Search terms “diabetes” and “self-management” with related terms were used. Only literature published since 1994 was included because this research would be informed by the Diabetes Complications and Control Trial (Diabetes Treatment Research Group, 1993). This large national clinical trial showed that good glycemic control reduced the risk for developing complications of diabetes. Two hundred and thirty-one citations were found and none of those were about Filipinos. For inclusion in this review, the article had to present results of research using a qualitative approach with adults with type 2 diabetes. Of those 231 citations, 24 were qualitative studies about the process of self-management. The findings of those 24 studies have been presented in Table 2.

The major areas covered in the diabetes self-management qualitative literature review were stages or phases of self-management, barriers to self-management, and facilitators of self-management. These areas are presented in the next three sections.

*Stages of Self-Management*

In eight of the 24 qualitative studies, a theme or category of stages or phases of self-management of type 2 diabetes emerged (Dietrich, 1996; Koch & Kralich, 2001; Maillet, Melkus, & Spollett, 1996; Rayman & Ellison, 1998; Stamler, Cole & Patrick, 2001;...
2001; vanDulmen & Bilo, 1997; Whittemore et al., 2002; Wiengra & Hewitt, 1994). The populations in these studies included First Nations adults in one reserve and urban dwelling adults in Ontario; women in the Mid-west who were exemplars in self-management; Hong Kong Chinese on insulin with a high fear of hypoglycemia and worry about complications; adults from rural Illinois; older women and younger men in a community setting in South Australia; black urban women in the Northeast and Southeast U.S.; adults in the Mid-west U.S.; adults seeing general practitioners in Northwest England; and post-menopausal women in the Northeast U.S..

In four of the studies, three stages of self-management emerged, but each study found different names or metaphors to describe the phases. In chronological order, words used to describe the phases were survival, regulation, and success (Wierenga & Hewitt, 1994). Also in chronological order, the metaphors of management were management as rules, management as work, and management as living (Rayman & Ellison, 1998). One study used a model depicting a core sequential process of self-management for integration of a chronic illness into an existing lifestyle (Whittemore, 2002). The process had three stages which were reiterative: establishing a new health pattern, embedding a pattern, and living a pattern. When living the pattern, participants reported a new cadence to life.

For adult men in a participatory action research study in South Australia, diabetes was a transitional event motivating their self-care (Koch & Kralik, 2001). For adults taking diabetes education classes who were interviewed pre-, during, and post-educational sessions, there was a shift in how they described control (Stamler, Cole & Patrick, 2001). Before the class participants spoke about controlling weight and blood
sugar. After the class control was about the lifestyle changes they had made and the resulting decrease in anxiety.

Two studies found that shifts in the provider-patient relationship and communication accompanied the different phases (Rayman & Ellison, 1998; vanDulmen & Bilo, 1997). In Rayman and Ellison's study (1998), patients relied less on providers over time, and by the third stage the provider's role was one of consultant and validator of capable self-management. In vanDulmen & Bilo's study (1997), the patients with poorly controlled type 2 diabetes were most satisfied when psychosocial issues were not addressed until the third visits with a new doctor, after doctor-patient relationships and treatment matters had been handled in the first two visits.

**Barriers to Self-Management**

Barriers to self-management in this literature included unrealistic weight goals set by providers (Maillet, Melkus & Spollet, 1996), general lack of knowledge about self-care (Tu & Morrison, 1996), and incomes below the poverty level (Bess, 1995). Communication from the physician at the time of diagnosis, if the seriousness of diabetes was not conveyed, was also a barrier (Dietrich, 1996). Families were sometimes viewed as deterrents to diet management because of nagging, but could also be viewed as supporters (Maillet, Melkus & Spollet, 1996).

Barriers to maintaining a diet plan were a desire for new foods, hunger, and planned and unplanned meal events, while barriers to exercise and self-monitoring of blood glucose were physical illness and unexpected life events (Hall et al., 2003). Symptoms of fatigue, weakness, dizziness, visual problems, and anxiety were barriers for
low income mid-life African-American women (Cagle et al., 2002). Lack of family support, money, and time were additional barriers for this group.

Several studies presented emotional barriers to self-management. Those barriers included a diminished sense of self and depression (Koch & Kralick, 2001); fatalistic attitudes which contributed to negative coping responses (Egede & Belladonna, 2003); social stigma resulting in unwillingness to test blood glucose and inject insulin except at home (Shiu et al., 2003); anticipatory anxiety and a sense of failure when self-monitored blood glucose levels were high (Shiu & Wong, 2002).

Facilitators of Self-Management

A health care organization with a culture of caring was an important turning point and facilitator of self-management for Midwestern women with type 2 diabetes (Rayman & Ellison, 1998). Other facilitators were relationships with providers which were built on trust, and providers who could respect cultural traditions. A perception of the seriousness of diabetes, and the development of complications, both contributed to compliance with the therapeutic regimen. For people with type 2 diabetes in England, five key concepts were identified for effective self-management: enough time for the medical visit, continuity of care with one clinician, ability to ask questions of provider, feeling listened to by health professionals, and ownership of the treatment regimen (Pooley et al., 2001).

For participants who were able to maintain behavior change for six months, the results of self-monitoring of blood glucose (SMGB) provided positive and negative reinforcement for all behaviors (Hall et al., 2003). For this same group of successful self-
managers, improved physical functioning with decreased symptoms motivated their exercise, while stimulus control and helping relationships (especially wives helping husbands) were important for diet maintenance. Key issues for making lifestyle change for adults who had received a nurse coaching session were composing a structure for and striving for satisfaction with diabetes self-management (Whittemore et al., 2002). These participants used self-talk to resolve intrapersonal conflicts, and used the personal strategy of avoidance to stick with their diet plan.

The presence of a significant other during diabetes education classes reduced stress for participants (Stamler, Cole & Patrick, 2001). Family members had a positive influence on self-management for the mother of the family when they assumed diabetes tasks around food, medical visits, and insurance (Gerstle et al., 2001). For African-American women, working with and being connected to their churches, and receiving guidance from their churches facilitated emotional self-management (Cagle et al., 2002).

A second search of the literature was done in the Social Science Citation Index, Bibliography of Asian Studies, ethnomed.org, and the Hawaiian Voyager Library Catalog of the University of Hawai‘i using the search term “Filipino.” Nineteen studies relating to health or migration were reviewed, and a summary of results pertinent to this proposal are presented in Table 3. Thirteen of the 19 studies were qualitative, and three of those 13 were ethnographies.

These different studies showed the importance of family on all aspects of the lives of Filipinos, including financial, emotional, spiritual, and social. Four factors in these studies potentially impacting self-management were health beliefs, migration status,
cultural adjustment, and degree of family reunification. These factors have been summarized below.

Filipinos and Health

For elderly Filipinos, health was viewed as a God-given gift, with food, one's own behavior, and exercise as the largest contributors to health (DiPasquale-Davis & Hopkins, 1997). Life satisfaction for elderly was related to good health status (Abenoja, 1997). Several survey studies showed that Filipinos rated themselves as having few health problems, when in fact they had undetected risk factors which were only detected when screening was done (Brown & James, 2000; Berg, 1999; Somera, 1997; Boren, 1994). For professional and managerial women in Manila, work and work outcomes were strongly related to life satisfaction (Berke et al., 1999). For Filipino mothers of young children, problem solving with peers who were friends produced better solutions to feeding problems than problem solving with professional staff (Ticao & Aboud, 1998). In the Philippines, volunteer community health workers were compensated with free medical care, but their volunteerism took second place when family finances were a priority (Heinonen, 2000).

These studies suggested that self-management of type 2 diabetes would be supported by cultural beliefs about health, at least for elderly, and that information about risk factors and health status would be important to facilitate self-management for Filipinos. Although good health was important to elderly, seeking medical care may not be as important as opportunities to earn money for younger people. For professional
women coming from the Philippines, the loss of a fulfilling job may negatively impact
the ability to self-manage.

Migration Status

Ethnography of families in the Philippines revealed that an overseas experience
was viewed as valuable despite the difficulties (Pettiera, 1992). Lack of money, a desire
to help their families and wanting a taste of the good life were the top problems
personally experienced by youth in a large national survey in the Philippines using a
participatory action research approach (Ramirez, 1987). Abenoja (1997) found that
elderly Cebuano immigrants living on Oahu often traveled back to the Philippines as
either a sojourner (i.e. stay for many months) or as a circulator (i.e. go back and forth
more frequently). Being a circulator or a sojourner was correlated with greater life
satisfaction as compared to those who had decided to stay in the U.S. permanently or
were undecided about their residency.

Also relating to life satisfaction for the elderly was how much they had
accomplished compared to their compatriots in the Philippines and how they were
evaluated by their compatriots (Abenoja, 1997). Migration status for the elderly may
negatively impact their ability to self-manage if they could not travel back to the
Philippines for financial or health reasons. Middle-aged or younger people who had
difficulty sending remittances home would likely also be negatively impacted in their
ability to self-manage.
Cultural Adjustment

Filipino immigrants working in hospitals in Hilo and becoming more American showed greater physiological stress unrelated to job strain measures than recently arrived immigrants (Brown & James, 2000). The investigators hypothesized that stress would be greater for newer arrivals. To account for the results, the investigators noted more would be expected from family and fellow employees the longer the subjects had been in Hawai'i. Elderly Filipino widows immigrating to the U.S. viewed themselves as determined, resourceful, and independent (Valencia-Go, 1999). This positive self-image would facilitate self-management.

Three phases of cultural adjustment were discovered for younger, college-educated Filipino immigrants: culture shock, ethnic awareness, embracing a hyphenated identity (Ascano, 1997). Those with realistic expectations had only a brief culture shock and less difficulty adjusting if their new lifestyle was an improvement over their previous lifestyle and within an established support system from their same ethnic background (Ascano, 1997). Younger, college-educated Filipino women recently immigrating to Hawai'i valued the traditional family, self-development and planning for change (Boren, 1994). When living with diabetes, these values would facilitate self-management.

Filipino-American high school students with professional parents who immigrated to the U.S. in the 1970s felt under intense academic pressure. Academic pressure was worse for the girls who also found it harder to assimilate than the boys (Wolf, 1997). Half of these high school students gave strong statements about family being at the center of the meaning of being Filipino, and they felt extreme pressure to keep everything within the family.
From these studies the degree of culture shock appears to vary by age and socioeconomic status, but overall stress may be greater the farther along one is in the cultural adjustment process. Factors related to cultural adjustment (i.e. language ability, self identity) may impact the ability to self-manage, especially when experiencing negative culture shock. Support from others of the same cultural group would likely facilitate self-management and cultural adjustment.

Family Reunification

The ability to reunite with families was strongly related to life satisfaction for elderly Filipino immigrants (Abenoja, 1997). Leaving children behind was not an uncommon practice for contracted migrant workers (Gonzales, 1998). Contracted workers often brought over siblings to work in the same business (Pettiera, 1995). For college students in the Philippines, the collectivism or the “we orientation” ascribed to Filipinos may be family related and not generalized to other social relationships (Watkins & Gerong, 1997). College-educated children may choose to go abroad for jobs with low pay but more than they would make at home. The family would expect them to send money home to support their parents’ lifestyle which might be more comfortable than their own (Pettiera, 1992). In a study co-sponsored by Australia’s Department of Ethnic Affairs and the Philippine Consulate General, the chief cause of failed marriages was the inability of Australian husbands to grasp the concept of strong family ties and filial devotion (Ramirez, 1987).

Family reunification was a goal for many Filipinos of different ages and migration status. For Filipino immigrants, incomplete family reunification may have a negative
impact of life satisfaction. The goal of family reunification, because of the financial requirements associated with sponsoring family members, may have a negative effect on achieving self-management goals for type 2 diabetes. The presence of supportive family may ease culture shock.

Pilot study

A pilot ethnography was conducted by the author at the Pinoy Clinic of an urban community health center (CHC) in Hawai‘i to describe self-management by uninsured Filipino with type 2 diabetes. The study consisted of three hours of participant observation and two semi-structured interviews (Leake, 2000). Data analysis identified 243 meaningful segments, which were categorized into six domains, each of which had two to six categories and sub-categories. The participants’ explanatory model for their diabetes included the risk factors of family history, obesity and eating the wrong foods. They had a positive view that taking medicine, following the right diet and getting exercise will have a beneficial effect, and that failing to do these self-management behaviors could result in complications.

Getting help from many sources was how the participants helped themselves. They viewed help as sharing information, lending support to listen to troubles, and finding a source of medical care they could afford. Although their poverty in the Philippines was viewed as a problem, they saw themselves in much better circumstances here in Hawai‘i. These women were less employable being fairly recent immigrants, but one already had a part-time job. Having a full-time job could get you insurance but also meant less time to go to the doctor or to workshops to learn about diabetes.
In the setting of the Pinoy Clinic, having insurance meant that you could afford to get the routine lab tests to monitor diabetes. Those lab tests which were not provided for free at the clinic included hemoglobin A1c testing, urinalysis for microalbumin, fasting lipid profile, liver and kidney function tests. These tests cost about $150 per year at the clinic’s discounted rates. The feedback from lab test results was viewed as valuable by participants to know how you were doing. Insurance also provided access to specialists such as ophthalmologists, podiatrists, or nephrologists. Even if one had full access to medical care, self-management was seen as necessary to avoid complications and premature death.

Participants were striving both for control and to be in a position to not have to worry about their diabetes. Confidence in doing what was right for their diabetes increased with seeing blood pressure and blood glucose numbers change in a positive direction. Being more relaxed meant that participants knew they were doing enough to reduce risk, while accepting that they could not control everything.

The support from the group, and celebrating the accomplishments of the group as distinct from their individual achievement, were apparent during the clinic. Relying on doctors to do what was best for you was a way to reduce worry. The reliance on doctors to do what was right, and the acceptance that fate or luck played a part in how things turn out, seemed to give the participants some respite from sole responsibility for self-management of their diabetes.

This pilot study was limited with only two participant interviews and three hours of participant observation. Both participants were doing well with self-management of their diabetes and had been diagnosed with diabetes during the past two to three years.
The participants also had the advantage of access to free services, self-management education, and medications. They gained support from fellow Filipinos and were possibly more informed about diabetes than other immigrants because of in-language education given by Filipino staff. The special services offered at the Pinoy Clinic might limit the transferability of the results to other uninsured Filipinos with diabetes.

Other qualitative studies had similar findings regarding barriers and facilitators of self-management (Ellison & Rayman, 1998; Rayman & Ellison, 1998). The two Filipino immigrants interviewed in the pilot study did not talk about going through phases of self-management, although one did mention making incremental changes and that changing diet and exercise got easier with the passage of time. They both spoke about taking the chronic disease self-management course as being a turning point where they learned both what to do and how to make change, a finding similar to Rayman and Ellison’s study (1998) with women in the Mid-west. Even though the Filipino women were low-income with no insurance, they had found a place where they could comfortably come for affordable, reliable, reinforcing, and reassuring services.

This pilot study also revealed barriers and facilitators to diabetes self-management, and the women interviewed were able to see two sides to barriers. Going to the clinic was seen as facilitating self-management because there was more education about what to do and how to make changes in life and written information about test results. The clinic was viewed as a barrier because there was not one doctor to rely on. On the other hand, going to private doctors was something only people with insurance could do. But private doctors did not give as much education or information about test results. Also, a person with insurance was probably working full-time with a second
part-time job. An insured person wouldn’t have time to go to the doctor unless they were seriously ill, much less have time to exercise and eat properly.

An expansion of the pilot study with continued purposive sampling was recommended to enhance transferability of the results (Leake, 2000). Additional participants would include people not doing well with diabetes, those having diabetes for more than ten years and therefore more likely to have developed complications, and participants of different ages to explore the influence of symptoms and functional limitations on both the explanatory model and self-management behaviors. The experience of uninsured Filipino immigrants in a rural setting was also recommended as they would likely be more physically active, and have less access to fast foods and to health care services.
CHAPTER 3: WILSONIAN CONCEPT ANALYSIS OF SELF-MANAGEMENT

Introduction

The Wilsonian method of concept analysis was chosen because of the need to clearly identify the essential elements of self-management of type 2 diabetes. Self-management has been a concept in the diabetes and chronic disease literature which was widely used but not always well-defined. There were several definitions which captured elements of self-management but were conceptually divergent. Wilson viewed concept analysis as an aid to clear thinking and communication in *Thinking with Concepts* (Wilson, 1963). He proposed 11 steps in concept analysis, culminating in the essential elements of the concept. Each section below addresses one step.

Isolating Questions of Concept

From his perspective as a philosopher, Wilson distinguished three types of questions: questions of fact, questions of value, and questions of concept (Wilson, 1963). Questions of fact can be answered with existing knowledge. Questions of value are answered based on the moral principles held by an individual or society. These questions of value are often where cultural differences arise. Several authors have contrasted Eastern and Western cultural values, and Inouye adapted these in her chapter on Asian American populations as shown in Table 1 (Inouye, 1999). The Western values of mastery, change, mobility, expression of emotion, physical vigor, self-determination, individualism, and future orientation seem more in concert with the biomedical concept of self-management of diabetes.
Questions of concept were defined by Wilson as questions about meaning. The answers to questions of concept depended upon the perspective from which the analyst viewed the question. The actual and possible uses of words and the criteria to determine meaning were the focus of questions of concept. Questions have been raised in clinical practice about the nature of self-management of type 2 diabetes. After the initial diagnosis of type 2 diabetes, in most cases a trial of an exercise and diet regimen would be undertaken to achieve glycemic control. Before initiating medication for diabetes, the practitioner would want to know if improved self-management could delay or postpone starting pharmacotherapy.

The same questions arise when glycemic control worsened, when oral medication had to be increased or insulin started. Typical questions included: 1) Can the patient make any additional changes in their self-management which would improve outcomes? 2) Does the patient have the knowledge and self-efficacy to improve their self-management? 3) What barriers to improving self-management does the patient identify, and can the barriers be reduced? 4) Has the diabetes progressed beyond the point where improved self-management can achieve desired biophysical outcomes? 5) Are there ever situations where self-management should not be the focus of an encounter between a practitioner and a patient with type 2 diabetes?

The first four questions listed above were defined by Wilson as mixed questions which include questions of fact and well as questions of value. Assessing knowledge, self-efficacy, and barriers would be questions of fact. Self-management behaviors can be measured by self-report, which may be more perception than fact. If patients with type 2 diabetes were hospitalized, they may have had near-normal blood glucose in a controlled
environment, but they were not able to do as well at home. Patients who were previously unable to exercise or stick to an eating plan may be able to make these changes when faced with the prospect of injecting insulin.

The fifth question would be a value question related to whether everyone is capable of self-management, and would it be worth the investment of time and effort of the practitioner and patient to work toward improving self-management. The importance of the individual versus the importance of the group may be different in collectivistic cultures compared to individualistic cultures. This difference in values might have bearing on whom to include in self-management interventions. The question of concept for this analysis will be “What is the logical nature of self-management of type 2 diabetes?”

*Right Answers*

To determine the logical nature of self-management of type 2 diabetes, the essential elements must be distinguished from elements which are extensions, derivations or metaphors of the concept. Exploring definitions from a wide variety of sources and disciplines is recommended for this stage of the analysis (Avant, 2000). Webster’s dictionary had no definition of self-management, but defines management as “the act, art or manner of managing, or handling, directing, controlling, etc.” (Webster’s Dictionary, 1997). This definition of management captured the idea of not only what you do but how you do it. A manager was defined as “one who is skilled in contriving, planning or intriguing so as to accomplish his purpose.” This definition suggested getting what you
A person could manage rigidly by following a prescribed regimen, or manage more loosely and flexibly, and still achieve the same outcome.

A person with mild type 2 diabetes could make many departures from a meal plan, and still have an acceptable hemoglobin A1c level of 6.8%. Such a person might be able to further lower his hemoglobin A1c by following his meal plan more closely, but he would still have met his purpose of reducing risk by having a hemoglobin A1c less than 7%. If the purpose were to have a hemoglobin A1c less than 6%, i.e. in the normal range for a person who did not have diabetes, then the purpose would not be met with a hemoglobin A1c of 6.8%.

Because self-management was a concept in several disciplines, the literature was reviewed broadly for definitions of self-management. There were 89 books cited for self-management as a key word in the University of Hawai‘i Library System. The term self-management has been used in the areas of business, health care and psychology, community and economic development, education, addiction, chronic disease, and ethics. The Management Dictionary had six definitions of management (but none of self-management). The most relevant definition for diabetes self-management was “that industrial activity which studies, analyzes, and reviews evidence, formulates decisions, and initiates proper action of appropriate nature” (Benn, 1952).

Writing about teamwork in business, Weiss equated self-management with personal power (Weiss, 1998). He defined self-management as “the ability to control what happens in the mental and physical space you occupy, the ability to control what you do and how you do it, and the competence and commitment to manage your own life” (Weiss, 1998, p. 11). A 1991 report titled Encouraging Employee Self-Management
in Financial and Career Planning described self-management as a management theme of the 1990s which implied a shift in responsibilities from the company to the individual (Dennis, 1991). This trend occurred to meet corporate objectives of cost containment, productivity and quality improvement, and meeting the needs of a diverse workforce. Self-management of financial and career planning in business was described as both a desirable goal and an unwanted consequence, in contrast to the previous paternalistic role of large corporations which provided secure jobs with ample benefits and opportunity for advancement in exchange for loyalty (the so-called “velvet coffin”) (Dennis, 1991).

In psychology, the term self-management derived from related concepts such as self-control, self-directed behavior, self-modification, and self-regulation (Holroyd & Creer, 1986; Watson & Tharp, 1972). Self-direction was defined as “the combination of skills by which goals are achieved” (Watson & Tharp, 1972). Self-regulation was defined as “any effort by a human being to alter its own responses” (Baumeister, 1994). In a chapter called “Self-Management: Taking Care of Yourself,” Baumeister et al. further described self-management a high level form of self-regulation with the basic principles of maximizing strengths, minimizing weaknesses, and making steady progress toward realistic and acceptable long-range goals (Baumeister, 1994). The authors also stated that there was less empirical evidence about self-management than self-regulation and that the studies have been in the area of business success.

Social cognitive theory from psychology has been used and tested extensively to explain why people make changes in health behavior and how they maintain the change (Bandura, 1997). Problems of ineffective self-management stem from a lack of self-efficacy which is required to make behavior change. Efficacy for self-regulation would
be required to maintain behavior changes. Elements of self-management included taking initiative for health care and dealings with health personnel and exercising personal control.

The characterization of self-management in business as both a desirable goal and an unwanted consequence had parallels to self-management in health care. Increasing use of traditional and alternative or complementary therapies by consumers, where people direct and pay for their care themselves, would be a form of self-management. Yet some patients and health professionals long for a return to a more paternalistic time when the health care system took care of you without worrying about cost.

Self-management in the nursing literature was first described in broad terms in the nursing literature by Nakagawa-Kogan. She described self-management training as addressing "the control of physical indicators, behavioral habits, and cognitive-attitudinal features" (Nakagawa-Kogan & Betrus, 1984). In later writing she described self-management training as a philosophy of care, a "group of intervention techniques that are compatible with a brain/body philosophy" and "treatment of the brain" (Nakagawa-Kogan, 1994).

The Arthritis Self-Management Program was one of the first, most studied and most successful self-management programs available for a specific chronic disease (Goeppinger & Lorig, 1997). In a later book for patients with any chronic disease called "Living a Healthy Life with Chronic Conditions" Lorig et al. described self-management as the management of three things: the work of dealing with your illness, the work of continuing your daily activities, and the changing emotions brought about by chronic illness (Lorig et al., 2000). In rheumatology, self-management was described as implying
"a shift in responsibility from the health care professional to the individual for the day-to-day management of their condition" (Newman, Mulligan, & Steed, 2001).

Self-management in chronic illness was early on defined as "performance of preventive or therapeutic health care activities, often in collaboration with health care professionals" (Holroyd & Creer, 1986, p. 29). Emphasis was placed on "the individual as decision-maker, one who uses problem solving skills to deal with issues arising from the regimen and the condition itself" (Chewning, 1982). Self-management was first defined in the diabetes literature by Goodall and Halford in 1991 as "a set of skilled behaviors engaged in to manage one’s own illness" (Goodall & Halford, 1991).

In the Core Curriculum for Diabetes Education, the skilled behaviors described as necessary for self-management included setting realistic self-care goals which fit with other life goals, problem solving, and juggling components of treatment in response to daily events and results of self-monitoring blood glucose (Peragallo-Dittko, 1993; Peragallo-Dittko, 1997). In its program announcement for research on diabetes self-management in minority populations, the National Institute of Nursing Research and three other institutes within NIH defined diabetes self-management as "client strategies and behaviors that contribute to blood glucose normalization, improved health, and prevention or reduction of complications" (NINR, 2000). In an article summarizing research evidence on diabetes outcomes, two physicians described self-management indirectly as a situation where "the informed patient defines his/her treatment goals and chooses therapeutic strategies that he/she will carry out in the long run" (Berger & Muhlhauser, 1999, p. 1677).
The "art" and "manner" aspect of Webster's definition of management were addressed in some of the qualitative nursing research reviewed in Chapter 2. This literature described on the lived experience of diabetes (Dietrich, 1996; Wiengra & Hewitt, 1994) and the experience of women who were exemplars of diabetes self-management (Rayman & Ellison, 1998). The determinant metaphor of balance emerged in a meta-ethnography of 43 qualitative studies and was predicated by a decision to assume control (Paterson, Thorne, & Dewis, 1998). In another study, exemplars of self-management described going through three developmental stages of learning to manage diabetes: management-as-rules, management-as-work, and management-as-living (Ellison & Rayman, 1998). These stages described the manner of managing and the associated feeling of being successful, which the subjects described as higher in the last stages.

From this cross-disciplinary review of definitions of self-management and the review of the qualitative literature on diabetes self-management, the several elements were considered extensions, derivations or metaphors of the concept of self-management. Those elements were the metaphor of balance, control, developmental stages of self-management, and the manner of managing. The following essential elements of self-management of type 2 diabetes were distinguished: possessing skilled behaviors and knowledge, planning, reviewing evidence, analyzing, making decisions, initiating proper action, making adjustments, taking responsibility, accepting risk, altering responses, maximizing strengths, minimizing weaknesses, making steady progress, and setting realistic and acceptable long range goals. The next sections of this chapter continue the Wilsonian method of concept analysis by looking at examples of diabetes self-
management which exemplify the concept, and examples which contain some or none of the essential elements of diabetes self-management.

Model Cases

Model cases are ones which include all of the essential elements for the concept of self-management of type 2 diabetes.

Case 1

CB was a 53 year old Hawaiian, Chinese, and Portuguese single man who received his initial diabetes education at a hospital-based diabetes center. During the education classes he saw a video with local comedian Frank DeLima, and he related to the message. He attended the diabetes management orientation at his health center, and took great interest in knowing his lab values from visit to visit. He had a psychosocial evaluation by a social worker for depression, and had a few sessions to deal with issues around his past substance use and incarceration. He faithfully made appointments for his diabetes check ups so he could get his quarterly HgbA1c tests done, and he recorded the results to track his progress. His one high HgbA1c value of 7.8% was decreased by adding a second oral agent. He quit smoking one year after his initial diagnosis. He admitted his diet and physical activity could be better, but he's cut out soda and cut down his beer. He had hypertension before his diagnosis, but had not developed complications from diabetes in the five years since his diagnosis.
Case 2

RN was a 60 year old uninsured Filipino immigrant who came to Hawai‘i three years ago. She cared for her pre-school grandchildren during the day, and had a part time evening job at a convenience store. She went to a community health center for her diabetes care, and was able to regularly attend a free diabetes clinic at that health center and get her medicine through the drug company’s patient assistance programs. She attended a chronic disease self-management course advertised through the Filipino radio station. As part of the action plans she made during the course, she was able to make incremental changes in her diet and control her consumption of sweets to bring her hemoglobin A1c to near normal. She was now content with just a taste of dessert, and handled going to parties by situating herself away from the food. She had a regular walking routine in the early morning. If it was raining, she danced in the kitchen instead. She utilized the blood pressure, weight and blood glucose readings from her monthly clinic visits as feedback to make adjustments in her routine. She has felt less worried about life now that she has been able monitor herself more frequently.

Conclusion

Both of these patients sought out basic diabetes education to know what they should do, and sought help making changes when needed. Both were viewed as partners in their care by the health professionals taking care of them. They demonstrated all of the essential elements of self-management of type 2 diabetes.
Contrary Cases

Contrary cases are those which display the opposite of the essential elements of diabetes self-management.

Case 1

PK was a 51 year old Japanese woman diagnosed with diabetes six years ago during a physical exam to become the foster parent of her grandchildren. At that time, she was ineligible for insurance because her husband’s SSI payments from his work-related back injury were too high to qualify for Medicaid. She visited her nurse practitioner infrequently but was able to intermittently take glipizide, hormone replacement, an anti-depressant and antihypertensive medication. Her annual HgbA1cs were 8 to 8.2%. During this time she was coping with a daughter in and out of drug treatment, a four-generation household, and her husband’s heavy drinking. She made some diet modifications and short-lived attempts at regular walking for exercise to help her grandson lose weight. When her husband died from cardiac arrest, she was able to qualify for Medicaid but still came to appointments only when called by the medical assistant to schedule them. She took her medications at least 80% of the time and her Hgb A1cs range between 7.2 and 7.6%. She continues to smoke, has a BMI of 27, and has developed mild renal insufficiency.
Case 2

KS was a 58 year old native Hawaiian woman with diabetes for 12 years. She was a frequent visitor to the community health center near the housing project where she lives. Her visits were for acute asthma or other illness more often than for diabetes follow-up. She was reliable for keeping appointments and followed advice about medication changes. She attended four of the six sessions of the chronic disease self-management program which were held at her housing project. When absent, she was trying to help out her mentally ill brother at a court appearance or caring for a sick grandchild who could not go to school. Although she's able to formulate goals and action plans to help her with her multiple chronic illnesses, the demands from her extended family were barriers to carrying out her plans beyond a few days. She enjoyed eating, and did not want to get gastric by-pass surgery which would help with her morbid obesity and sleep apnea.

Conclusion

Patients in both contrary cases relied on their health providers to call them to schedule appointments. They were unable to plan or take responsibility for their behavior. They were the source of strength for their families, but were not been able to maximize that strength for their own self-management. Managing negative emotional states was difficult, causing breakdowns in their ability to self-manage. The management of diabetes was reactive rather than proactive, and was directed by the family and the health care providers.
Related Cases

A related case was one that was similar to the concept under analysis, and aided in the analysis.

Case 1

TR was a 76 year old Caucasian man who is a retired salesman. Since his diabetes was diagnosed 13 years ago, he has relied completely on his wife to manage every aspect of his diabetes including taking pills and checking his blood glucose twice a day. Ten years ago he was hospitalized for septicemia, and he did not recognize the symptoms of diabetic ketoacidosis since he did not remember ever learning about them. He was very sedentary although he is physically capable of walking and exercising in a chair. His food intake was controlled by his wife, but at any social occasion he ate anything and as much as he wanted. Overeating often resulted in the need for a shot of short-acting insulin if it occurred before the afternoon glucometer reading was taken.

Conclusion

This patient was managed by his wife, not so much by delegation as by abdication. Diabetes disease management was occurring, but it was not self-management. Self-monitoring of blood glucose was done because the doctor ordered it, but high readings were not used as evidence to make behavior change, and low and normal readings were used to rationalize over-eating.
Borderline Cases

A borderline case was one where it was not certain if the concept was occurring.

Case 1

CK was a 55 year old Filipino married woman who was screened for diabetes at a community event. She worked full time stringing leis, and was paid under the table. She was saving money to be able to petition her children to come from the Philippines, and her $3000 savings made her ineligible for Medicaid. Although she came regularly for appointments to get free sample medications, she was often without her medication for several weeks when she came in. Her last HgbA1c was 11.1%. Her blood pressure continued to be above target even though she was taking three medications for hypertension. She was strongly encouraged to do self-monitoring of blood glucose with a glucometer, but declined the offer of free test strips and a machine. She recently completed a self-management workshop on her day off with six other Filipino women. While a group participant she was able to maintain her action plan of 15 minutes of walking every day, but was not able to increase her walking time to improve her blood pressure and blood sugar results. Her BMI was 33, and she gained 15 pounds since her diagnosis.

Case 2

CS was a 37 year old Caucasian man newly diagnosed with type 2 diabetes. He was a musician, and traveled frequently from Hawai‘i to the mainland to perform. Because of his very high blood sugar at the time of diagnosis, he was immediately started
on medication. He had a glucometer, but did not record his numbers. He read several
booklets on diabetes and gave feedback to the clinic staff about which booklets he found
most informative. He had many questions about what to eat but had not found time in his
schedule to meet with the nutritionist. By 24 hour recall his diet seemed reasonable.

Conclusion

These patients were very goal oriented, but improving their diabetes self-
management was not their primary goal. They had knowledge about diabetes and its
complications, but had chosen not to take action. CF was able to make behavior changes
over the short-term with much social support, but often relapsed. Making adjustments
and making steady progress were elements missing from her story. CS was diagnosed
recently, and made some progress in diet changes and taking medication. It remains to be
seen if he will attain steady progress.

Invented Cases

When our ordinary experience does not provide instances to clarify the concept,
Wilson recommended using imagination to create such cases (Wilson, 1963). Because
there were many cases available to describe diabetes self-management, invented cases
were not created.

Social Context

Diabetes self-management, previously called "self-care", has long been
recognized as key to good glycemic control (Glasgow et al., 1999; Norris, Englegau, &
Narayan, 2001). The term began to appear more frequently in the diabetes literature after the publication of the DCCT in 1993, which showed that good glycemic control substantially reduced the risk of complications from diabetes for persons with diabetes type 1 (Diabetes Research Group, 1993). The compliance perspective gave way to the empowerment perspective when both health care providers and patients accepted that most of the responsibility for diabetes care rested with the person who has the disease.

Self-management skills, as distinct from self-care skills and coping skills were included in the last two editions of the Core Curriculum for Diabetes Education published by the American Association of Diabetes Educators (Peragallo-Dittko, 1993; 1997). Referral to diabetes self-management programs for patients in the action stage of change were recommended for that core curriculum. Although progress has been made in getting insurance coverage for self-management programs and for glucometer test strips, the full integration of self-management into primary care practice had miles to go.

There have long been disparities in health outcomes for most minority groups in the U.S. as compared to national averages. Although some of this disparity has been due to poverty, genetic and cultural influences also exist. In Hawai’i, diabetes has affected Asians and Pacific Islanders more often and more adversely than the rest of the nation (Sloan, 1963; Hawaii DOH, 2000; Tom, 2001). Diabetes research has shown positive correlations between good diabetes outcomes for individuals and variables influenced by personality and culture. The large majority of studies about self-management, however, have been conducted in Western cultures with Caucasian subjects. The very concept of self-management may be perceived as something different for Asian and Pacific Islander cultures.
Underlying Anxiety

Conceptual questions often arose because of some underlying anxiety. In the case of diabetes self-management, there were potential anxieties for both the person with diabetes and the health care provider. The person with diabetes might feel abandoned if he were forced to figure things out on his own. A fully informed patient who wanted to accept responsibility for his outcomes might be overwhelmed by a personalized risk profile which looked grim. When fear has been too great, the patients sometimes have given up.

For health care providers, a self-manager with high self-efficacy may decide to stop treatment or ignore advice. Practitioners must give up control to enable patients to be true self-managers. Changing to this role of facilitator or coach may be difficult for those with a directive communication style. Primary care practitioners may not know how to enhance a patient's self-efficacy for behavior change during a brief, one-on-one patient visit. Self-management education groups have proven successful, but changing to group visits or running groups may be difficult logistically in primary care settings. Some patients may never be successful as self-managers, and the practitioner may need a fall-back plan to protect such vulnerable patients.

A clash of values may occur if a patient or practitioner do not hold the same view of what their role should be. The essential elements of self-management are more aligned with a Western world view of individualism, future orientation, divergent thinking and discovery learning. A patient may have wanted to be told exactly what to do instead of figuring things out in a trial and error fashion. Type 2 diabetes can be a
relatively a symptomatic disease even if control of blood glucose was only fair. Self-managers must change behaviors today to avoid complications in the future. A person who was more concerned about the present than the future may not have been interested in setting long term goals about reducing risks of complications. Approaches would need to be individualized for most patients.

Putting all the responsibility for outcomes on the individual with diabetes may have resulted in ignoring the influence of the environment, community and culture on outcomes. There has been ample literature on health disparities related to poverty and ethnicity (CDC, 2002; Nazroo, 2001). Focusing solely on self-management could distract attention from needed population-based approaches which have been beyond the typical primary care practice.

Practical Results

Understanding the logical structure of self-management could help patients and practitioners understand what self-management of diabetes entailed. This analysis could be used to evaluate patients' skills in self-management and to help measure the concept in research. A common understanding of the definition of self-management would focus the agenda of the medical visit for a person with diabetes to maximize the use of the time for the patient/self-manager to get what was needed from the health care provider/consultant.
The priority of the Wilsonian analysis of diabetes self-management was to choose critical elements to allow use of the concept to its fullest advantage (Avant & Abbott, 2000). The definition should be decisive about the central meaning, and choose the most useful words over others. The concept should not be so delimited that it becomes unusable, nor so loosely limited that it becomes meaningless. From the eleven steps taken in this analysis, the essential elements of self-management of type 2 diabetes were as follows:

1. The self-manager has knowledge and skills needed to take medication, test blood sugar, exercise, eat healthfully and manage stress and negative emotions.
2. The self-manager sets realistic and acceptable long range goals.
3. The self-manager must have a plan to initiate proper action to achieve goals.
4. The self-manager evaluates his performance by reviewing evidence and makes adjustments in behavior to make steady progress toward goals.
5. The self-manager decides what level of risk he is willing to accept, and sets goals in alignment with that decision.
6. The self-manager takes responsibility to consult with his health care team at regular intervals and when needed.
8. The self-manager rates his perceived self-efficacy for taking medication, testing blood sugar, exercising, eating healthfully and managing stress and negative emotions, and takes action to increase his self-efficacy.
In summary, the eight essential elements of self-management of type 2 diabetes were derived from Wilson’s method of concept analysis. The question of concept was about the logical nature of self-management of type 2 diabetes. Determining which essential elements of self-management were evident for uninsured Filipino immigrants is the focus of this study. How the presence of essential elements were assessed will be presented in Chapter 4. Further analysis of how the study participants self-managed and how well they did with self-management will be presented in Chapter 5. Discussion about whether study participants followed the logical nature of self-management derived from the preceding concept analysis will be presented in Chapter 6.
CHAPTER 4: METHODOLOGY

Conceptual Orientations

Two conceptual orientations guided the study. One orientation was Arthur Kleinman’s (1980) explanatory model framework. Explanatory models (EMs) are personal beliefs used to recognize, interpret and respond to a specific illness experience. The concept of EMs has been used in nursing research to explore health and illness beliefs, linkages between beliefs and action, help-seeking behavior, and nurse to client communication (McSweeney, Allan & Mayo 1997). EMs typically describe five parts of an illness experience: the etiology, time of onset of symptoms, pathophysiology, course of sickness, and appropriate treatment. The EM framework was chosen because learning the EMs of the participants in this study can help to improve the effectiveness of future self-management educational programs for Filipinos.

EMs are often unconscious and change over time, as contrasted with generalized health beliefs which are more stable and independent from a particular illness experience (Kleinman, 1980). In an ethnographic study describing the EMs for type 2 diabetes used by 19 low-income Mexican-American women, informants considered the resolution of economic and family problems to be crucial to diabetes control (Luyas, 1991). Exploring patients’ EMs contributed to culturally appropriate treatment addressing lifestyles, priorities, and illness concerns in the context of daily life (McSweeney, Allan, & Mayo, 1997).

A second framework for the study was a model for explaining health disparities developed by Cooper, Hill and Powe (2002). In 1993 the Institute of Medicine developed
a model to resolve conceptual problems in the definitions of equal access to health care (IOM, 1993). Bierman et al. (1998) went further in a subsequent model with three levels of barriers to access, namely access to the health care system, structural barriers within the system, and the ability of the provider to address the patient's needs. Cooper, Hill and Powe (2002) blended these models into a third model which expanded the scope of barriers and measures of provider quality, and included patient views of care. This model is depicted in Figure 1. This model was selected as a conceptual framework to organize findings from this study for incorporation into future intervention studies to reduce disparities in outcomes for this vulnerable group of Filipino immigrants with diabetes.

Design and Method

Because of the lack of knowledge about uninsured Filipino immigrants and self-management of type 2 diabetes, a qualitative method was used. In choosing from among the five traditions of qualitative research (biography, case study, ethnography, grounded theory, and phenomenology) the question of what is needed most as contributing to the scholarly literature in the field needed to be asked (Creswell, 1998). Knowledge about this culture-sharing group and how they self-manage their diabetes was important because of the large numbers of Filipino immigrants in Hawai‘i and the prevalence of type 2 diabetes in this group.

Ethnography as a method was selected to help people think about culture, how it works, and its consequences. The study design was descriptive, and used an ethnographic approach to gather and analyze data reflecting why a group of people do what they do, and depicted human behavior, beliefs and values with a cross-cultural
perspective (Roper & Shapira, 2000). A focused ethnography was conducted because it has been frequently used in clinical settings for public health and nursing research. The investigator had experience with ethnography in her pilot study, and had available consultation from faculty experienced in the method.

Criteria for Ethnography

In their nine criteria for a “good ethnography,” Spindler and Spindler (1987) emphasized the requirements to explain behavior from participants’ point of view, be present in the situation, and to engage in constant interaction. This study was designed as an applied ethnography with the two goals of understanding cultural problems in a community, and using the research to solve problems or bring about change (Schensul, Schensul, & LeCompte, 1999). Because of the long term professional acquaintance with the investigator, subjects may be more candid than with surveys.

Criteria of Utility

As an applied ethnography, the study sought utility. Stakeholders and clients were more interested in what could or should be rather than the current situation. Chambers argued that the criteria of utility are as vital for applied research as the criteria for establishing scientific reliability and validity (Chambers, 2000). He identified the five criteria of utility as accessibility, relevance, significance, credibility, and prospect. These criteria were met through a Diabetes Research Party for participants at the conclusion of the field work; debriefing with medical, nursing and management staff at CHC about the study findings; and an external audit of the study by an expert researcher.
Standards of Quality and Verification

Lincoln and Guba’s (1985) standards of quality and verification were adopted. Trustworthiness for a post-positivist approach was established by meeting the criteria of credibility, transferability, dependability, and confirmability (Guba & Lincoln, 1989). Of eight identified verification procedures, Creswell recommended engaging in at least two procedures for any given study (Creswell, 1998).

For credibility (the equivalent of internal validity for quantitative studies), prolonged engagement in the field and triangulation of data sources, methods and investigators was done. The investigator was in the field for ten months with over 100 hours of field and participant observation described in a later section. The investigator had been practicing at KPHC as a nurse practitioner providing primary care services to adults for eight years.

For credibility member checks were conducted with the participants after the interviews had been transcribed, coded and analyzed. In member checks the researcher seeks participants’ views on the credibility of the findings and interpretations (Lincoln & Guba, 1985). This occurred at a Diabetes Research Party which eight of the 11 participants, including one of the men, attended. The party was arranged by a Filipina secretary in the Health Education Department at CHC, and the community health worker provided interpretation in Ilocano. Participants and CHC staff were also asked to verify observations and interpretations from field work. Debriefing was conducted with Filipino staff after field observations, and on one occasion a public health professional conducted a waiting room observation.
Quantitative data on the participants were collected from their medical records and during interviews. Triangulation of data was done by using HgbA1c as a surrogate measure of self-management. Additional quantitative data included the number of years with diabetes and the number of years since immigration. For transferability (external validity in quantitative studies), thick description of the setting and content of interviews is provided in Chapter 5. A systematic approach of taking field notes and writing memos to the notes within 24 hours of the data collection was used.

For confirmability and dependability (reliability in quantitative studies), an audit trail was conducted. This external audit of the research process was conducted at the conclusion of the data collection and analysis by Kathleen May, RN, PhD, an expert in qualitative research currently at the University of Texas at Austin. She used Lincoln and Guba’s (1985) fourth generation evaluation to conduct this audit. Her report found the methodology sound and included recommendations to clarify the coding domains (see Appendix E). These recommendations were adopted by the investigator.

*Sample and Setting*

Uninsured Filipino immigrants were chosen as participants for several reasons. Recent immigrants would be more likely to express Filipino cultural values than second generation Filipino-Americans. The Commonwealth Fund 2001 Health Care Quality Survey showed that Asian Americans whose primary language was not English felt less likely to feel involved in decisions about health care (58% vs. 31%) and less likely to feel they had spent enough time with their doctor (52% vs. 19%) (Hughes, 2001). Uninsured participants would need to make difficult financial decisions and develop good problem
solving skills as self-managers to overcome their financial barriers.

**Purposive Sampling**

Purposive sampling was done to select a range of participants with factors likely to have influenced self-management of type 2 diabetes. Based on the literature reviews in Chapter 2, three factors were considered in selection of participants for structured interviews: years in Hawai‘i (Brown & James, 2000), years with diabetes (Ellison & Rayman, 1998; Hernandez et al., 1999; Wierenga & Hewitt, 1994), and frequency of travel to the Philippines if the participant was over 60 years old (Abenoja, 1997). These factors are displayed in Table 4. The aim of the purposive sampling was to have at least one participant with each factor from the total number interviewed, and this was accomplished.

**Community Health Center**

The sample of uninsured adult Filipino immigrants with type 2 diabetes was drawn from patients at an urban community health center (CHC). These participants had attended the Diabetes Clinic at the CHC. This health center was selected because of the high percentage of Filipino patients and the presence of a Filipino community health worker and Filipina nurse. Having language interpretation available in-house made CHC an attractive health care home for recent immigrants. CHC had also been the practice site for the investigator since 1995, and she had already established rapport and trust with many patients in the population.

A second site in a rural area was initially considered. This site was a free satellite
clinic of a federally qualified health center where the investigator would have been an outsider. After a site visit the population was found to be primarily second and third generation Filipino-Americans and therefore more influenced by American customs and beliefs. The number of potential participants was sufficient at CHC to use just one site.

*Protection of Human Subjects*

Approval for the study was obtained from the Committee on Human Subjects at the University of Hawai‘i at Mānoa. After this approval was obtained, approval from the CHC’s Program, Quality and Research Committee was obtained. Approval for informed consent through an oral briefing was requested because requiring signed consent forms might have deterred potential participants with questionable immigration status. The application to the Committee on Human Subjects is provided in Appendix A and the text of the oral briefing for informed consent is provided in Appendix B.

*Data Collection*

*Field Observations*

The investigator was in the field from August 29, 2002 when she presented her planned study at an all staff meeting at CHC, through June 20, 2003 when she held an end of study Diabetes Research Party with her participants. Arrangements were made with the health center staff to observe during clinic hours and group education classes. The Filipino community health worker agreed to be observed doing her job. One of those observations included an interview of an uninsured Filipino client by the CHC’s eligibility worker. Observations were made in the health center’s waiting room and in
classes for Filipinos on nutrition and cancer screening. A total of 26 hours of participant observation at CHC were conducted.

A total of 42 hours of field observation occurred at community events, cultural events, and walks through the community of the CHC. These events included a diabetes screening in late August 2002 at a community center sponsored by a Filipino physician and her politician husband and his victory party for re-election to his city council seat. The investigator was an advisor to the Filipino Nurses Association and attended their Annual Dinner and induction of officers. To gain further insight into Filipino culture, the investigator attended a number of Filipino social events unrelated to health care. These included the Terno Ball and the Ati-Atihan Festival with dancing, performances, and a fashion show with men and women, as well as the celebration of the one year anniversary of a Filipino community center with exhibits of issues currently important to Filipinos on the island. Lastly, the investigator was enrolled in a Philippine Literature in English course at the University of Hawaiʻi at Mānoa during the spring semester of 2003, with 45 hours of class time with 17 Filipino undergraduate students in a classroom of 20 students.

Participant Interviews

Recruitment

Possible participants were initially identified in the billing system from a list of Filipinos who were uninsured at their first office visit at CHC. A limitation of the billing system was that insurance status for an individual was tied to the date of their first visit. The patients on this list had an office visit between July 1, 2000 and June 30, 2002 and their visit was for diabetes ICD9 codes 250.0 through 250.99. Patients with fairly recent
visits were identified to assure a current address and phone number. Seventy-nine names were on that list. The list was updated to identify which patients were currently uninsured, and only 25 names remained. One of these names was eliminated because the patient was miscoded as being Filipino. The Filipina nurse attempted to call the remaining 24 patients and sent a letter in Ilocano to one patient who did not respond to phone calls. She was able to contact 11 patients, and four of those were either insured or no longer considered themselves to be patients at CHC. All seven of the eligible patients agreed to be in the study.

Two more participants were identified by looking through the 80 charts of the Diabetes Clinic which were kept separately from the main clinic charts. Because there were no charges for the Diabetes Clinic, patients did not receive a bill and were therefore not in the CHC’s billing system. The final two participants, new attendees of the Diabetes Clinic, were identified by the investigator during participatory observation of the clinic. Both participants agreed to be interviewed. One of these participants was included even though he had been diagnosed with diabetes only two months earlier. He was included to provide gender balance in the sample, and to validate the outlier responses from the other male participant to questions 12 and 13 in the structured interview guide. The Filipina nurse was present to serve as interpreter at all but two interviews which were with the final two participants who had been in the US an average of 22 years and did not require language interpretation.

Individual interviews were scheduled at the convenience of the participants and at their choice of location at the clinic, their home, or other suitable place. Interviews were conducted until saturation was achieved and were conducted between October, 2002 and
February, 2003. Six of the interviews were conducted at the health center in the office of the Filipina nurse who staffed the Diabetes Clinic. One interview was done at the participant’s home (due to advanced age and disability) and one was held in a conference room at a community college near the participant’s workplace at the end of her shift. Another interview was done in a conference room at the health center with a participant who was fluent in English.

After interviewing nine participants, it was decided to include the participants from the investigator’s 2000 pilot study. This decision was made in order to obtain sufficient numbers of participants who had recently immigrated. The Filipina nurse who interpreted in the pilot study also was the interpreter for this study. The semi-structured interview guide used in the pilot study differed from the interview guide used in this study. Changes to the questions for this study were based on participants’ reaction to the questions and were made to improve understanding. One question in the pilot “What does your diabetes do to you?” was changed to “How does your diabetes make you feel?” in this study. A question was added “What changed in your life after you found out you had diabetes?” to distinguish changes the participants initiated from other types of changes. Both of the participants in the pilot study were women, bringing the percentage of male participants to 18%, close to the 20% of males in the population of Filipinos in Hawai’i with type 2 diabetes (Tom, 2000).

Instrument

A researcher-constructed semi-structured interview guide consisting of 17 questions was used (see Appendix C). The interview guide from the pilot study was
adapted to include questions about changes in the participants’ lives since their diabetes diagnosis, and about barriers. An introductory question with follow-up questions assessed age, years in Hawai‘i, and years with diabetes. The first five questions of this guide were developed by Kleinman (1980) to elicit explanatory models of health problems. The remaining questions were used to elicit culture-specific influences on self-management of diabetes and description of elements in Cooper, Hill and Powe’s health disparities model (see Figure 5). The questions were open-ended and elicited responses related to specific elements of the model, i.e. personal and family barriers, financial barriers, patient adherence as a mediator, and patient views of care.

Data Analysis

Data analysis was conducted as described by Roper and Shapira (Roper & Shapira, 2000). Coded field notes, memos, journal entries, and interviews were coded using open coding. First level coding reduced the data into meaningful segments. Domains were established to reflect the explanatory model of health problems and self-management activities. Meaningful segments were then organized to compare, contrast and identify patterns from which categories and subcategories emerged. The domains, their categories and sub-categories were analyzed for cultural themes. Themes were induced from the text by immersion in the interview transcription, field observation notes, memos and existing documents.

Ethnograph Version 5, a qualitative data analysis software package, was used to organize the data. Ethnograph was used because two of its features allowed for efficient coding and retrieval of data. The family tree for codes was displayed and linked to the
code book, and allowed for an easy click-and-drag movement of codes throughout the tree. Ethnograph's project manager function allowed for creation of files of search output within the project for easy transfer of quotes into the study report.

Limitations

Filipino immigrants who did not speak English, Tagalog or Ilocano were excluded in this study because the interpreter was limited to these two Filipino dialects. Limited funding did not permit back translation of the interpretation into English or direct transcription of Ilocano and Tagalog. As a focused ethnography, only people who were currently seeking health care services for their diabetes within the community health center were included. People who had dropped out of care because of financial barriers were therefor not included. Compared to other places on the US mainland where Filipinos commonly migrate, Hawai'i has unique demographics and local culture with a primarily mixed Asian population. This uniqueness may mean the results are less transferable to other parts of the country.

Very recent poor immigrants did not meet the inclusion criteria because of the success of the eligibility worker in enrolling patients in the Immigrant Health Initiative (IHI) prior to their first visit at the CHC. This unique state-funded program in Hawai'i began after the enactment of Welfare Reform federal legislation in 1996 disqualifying eligible immigrants from enrolling in Medicaid for five years if they came into the US after August 22, 1996. Although IHI did not provide hospital or emergency room care, medical visits, lab tests and medications were covered. People enrolled in IHI were considered partially insured.
During the investigator's time in the field, there were no recent immigrants (i.e. less than five years in Hawai'i) meeting Medicaid eligibility requirements who were not already enrolled in IHI at their first visit. In order to include more recent immigrants, the participants from the 2000 pilot study were included in this study. The availability of the IHI program at CHC skewed the participant sample toward more employed, higher income immigrants.

Another limitation was the investigator's dual role as primary care provider for six of the 11 participants. In their role as patients the participants may have told the investigator what she wanted to hear, i.e. what they had learned and knew they should be doing rather than their actual behavior. On the other hand the participants may have been more comfortable with an investigator they knew. This was the case for one of the investigator's patients who revealed a lot about her use of alternative therapies for treating her diabetes. Overstating adherence to a therapeutic regimen is always a risk for any self-report about behavior.

A further limitation related to discerning the explanatory model of diabetes by Filipinos was the fact that the investigator conducting the interviews was not Filipino and was not a speaker of any Filipino dialects. An example of how this outsider status might influence results is provided by Poss and Jezewski (2002), who studied Mexican Americans in a border town for their explanatory model for diabetes. Initial interviews were conducted in participants’ homes by Mexican-American health care workers. The concept of susto ("soul loss" due to sudden fright) emerged as a primary precipitant of diabetes. When a later focus group to explore the concept of susto was conducted by an Anglo facilitator at the health center, no one spoke of susto. Instead, the explanatory
model shifted to what the participants had been taught were the reasons for diabetes (e.g., obesity, poor diet and heredity). On the other hand, outsider status may be an asset when collecting ethnographic data. As a cultural outsider, the investigator probed for further explanation from her Filipino participants when the data contrasted with the expectations of her culture of origin, white Anglo-Saxon Protestant on the East Coast of the US mainland.
CHAPTER 5: FINDINGS

Field Observations

The Filipino Community

During the investigator’s time in the field, there were several health-related events on the island for Filipinos and media stories about Filipinos with a health angle. In late August 2002 a Filipina internist in the community held her 19th Annual Health Fair in the gym at a community center with CHC staffing a diabetes screening table. This event brought out many providers, community members, and community leaders. The diabetes screening was targeted to the uninsured from the primarily Filipino community. In addition to health screening, vendors of many beauty and health-related products were promoted. Over 100 people were screened for diabetes, and 11 people with diabetes received a free hemoglobin A1c courtesy of a drug company. The physician’s husband was running in the primary for re-election as city council member, and all the participants at the health fair were invited to a victory party with a huge table of food provided by the family.

An example of literature displayed at the health fair was “Speaking from the Heart,” a guide to beating heart disease and stroke written for women published by the local chapter of the American Heart Association. One of two featured stories was about the mother of the Filipino-American Miss America from Hawai’i. She had diabetes and had a heart attack with atypical symptoms eight months before her daughter was crowned. The retired Miss America was featured in a local health magazine in Spring
2003 as a proponent of exercise for good health and weight control, while emphasizing that a healthy lifestyle was key to beauty. The message for the mother’s peers was to get checked for cardiovascular disease and know the signs; for the former Miss America’s peers, the message was exercise.

Also in late August 2003, the blessing of the new home of a Christian medical mission occurred. The mission has sent specialists to the Philippines, and has operated a free clinic in the same neighborhood as the CHC. The clinic has been open since 1995 and is staffed by volunteer doctors and nurses, many of whom are Filipino. The clinic’s focus has been on acute care, sending patients with chronic problems like diabetes to CHC where they could receive continuity of care with a single provider.

In October 2003 the Oahu Filipino Community Council (OFCC), with the support of the United Filipino Council, sponsored a conference on tobacco use among Filipinos, with an opening prayer “only through God can they control themselves to control smoking.” The event was well-attended by the officers of many Filipino groups and the Consul General of the Philippines. The speakers were organized by the Health and Social Services Committee of OFCC. Several alarms were raised at the conference. Filipinos and Hawaiians had the highest rates of smoking among teenage girls, and food service workers have a 50% higher risk for lung cancer than other workers because of environmental smoke. In Hawai‘i, one third of workers in the service industry are Filipino, and one half of the members of Local 5 (hotel workers) are Filipino.

In a March 2003 issue of the *Fil-Am Courier*, the cover story was “Diabetes – The Silent Killer.” Although the cover photo of a school-aged girl injecting herself with insulin was mismatched with the title of the story, the inside story was about a popular
local Filipino disc jockey and the consequences of his denial of his type 2 diabetes diagnosed when he was only 17. He had lost both lower legs to amputation and was on renal dialysis. He encouraged people with diabetes to become a partner with their doctor, play an active role in their care, and not be ashamed to ask a lot of questions.

The Neighborhood

Three of the five census tracts most populated by Filipinos in Hawai‘i are located in the community served by CHC as announced in Honolulu Magazine’s October 2002 issue. This urban community is characterized by “mom and pop” stores, Asian and local restaurants, and other small retail businesses along with small industrial workshops. Tucked away off the side streets the residences vary from large multi-generational homes, to small wooden plantation worker cottages, to small apartment buildings. Although the neighborhood is urban, fruit trees (mango, sour sop, jabon, papaya, banana, etc.), bitter melon and beans, and flowering trees and shrubs typical in Hawai‘i grow in slivers of space around these residences.

One area along the main commercial thoroughfare has a distinctly Filipino flavor which is reflected in the names of stores and products. Filipino restaurants and bakeries are busy at the lunch time hour. There are a number of thrift stores run by churches and small groceries specializing in foods imported from the Philippines. Many variety stores advertise express or same-day money remittances done by many companies with different rates to different areas in the Philippines. Tour and travel companies and international long distance phone cards are easy to find. Although part of a city, this area has a small town feel.
The Health Center

CHC is housed in a two-story tan stucco building. By most mid-mornings, the waiting room on the second floor is full to capacity, emptying out by noon only to fill again by mid-afternoon. Those waiting represent many countries as identified with push pins on the large world map on one side of the room. The health center was founded in 1975 by leaders of a local church, and their pictures were prominent on another wall in the waiting room. The church housed the clinic for almost 20 years before the current location was retrofitted to an existing structure.

The main clinic maintained architectural elements to evoke the feeling of being in a church, with many windows near the ceiling and floor to ceiling windows in the exterior walls. The walls are soft white and the seating is rows of many two or three person couches with durable with wooden arms and intact vinyl upholstery in slate blue. The brightness and openness to the sky help to soften the crowding at peak times. Up at the top of the peaked ceiling looking down on the goings on is a large portrait of Queen Emma, whose foundation was one of many generous donors to the capital fund raising effort. At the front of the waiting room is a large aquarium which serves to soothe waiting adults and enthrall children.

For patients with no or limited English, the community health workers (CHWs) are the first and last contact for immigrant patients needing language interpretation or a familiar face to see. There are six CHWs, five women and one man, who speak a total of nine languages. CHWs follow patients through all the steps of the medical visit, providing language and cultural interpretation to both patients and providers. The busier
interpreters are often overhead paged, with requests to be in several places at once. Although the waiting room is often crowded, the many languages spoken provide some degree of privacy for patients.

Health care visits are often a family affair, with many family members accompanying the patient. Five or six community health care workers are housed behind the receptionists with a plexiglass divider. During the investigator's observations, the Filipino CHW was not in high demand. The Filipino immigrants often had good proficiency in English or would bring a friend or family member who could serve as interpreter.

The Filipino CHW was a woman close to retirement who had worked at CHC for four years. Her husband was a WWII veteran and as such was allowed citizenship in the U.S. He came to Hawai‘i after retiring as an electrical engineer. She was a health educator with a Master's degree in health education from the University of the Philippines. They have succeeding in earning enough in their current entry level jobs to fund college for their grandchildren back in the Philippines. She considered those who were unable to find jobs in Hawai‘i as the most distressed and more likely to return to the Philippines.

The CHWs bring all uninsured immigrants to see the eligibility worker to determine if they might qualify for Medicaid or the Immigrant Health Initiative (IHI). During one session with a Filipino in her 60s, the eligibility worker had to explain that IHI was only partial insurance for low income recent immigrants who met income and asset requirements. If IHI enrollees later become employed and exceed the income limit, they lose IHI. After looking at her passport and asking a few questions about her
household and means of support, the eligibility worker told her she would probably qualify. In closing, the eligibility worker said, “If you get a job and get insurance, you won’t need this anymore.” The Filipina seemed upset by this remark, and in a more forceful tone of voice than used in the preceding conversation, said, “I can get a job. I am strong.”

Participant Observations at CHC

Lunch with Staff

Most CHC staff eat their lunch in the lunchroom, with support staff usually arriving first on staggered shifts, and the providers eating later after finishing with the morning’s patients. On one day conversation turned toward education. Several staff in their late 20s and early 30s, including medical assistants, nurses and the cashier, had gone to high school in the Philippines. They told tales of always being seated by academic achievement, with the smartest students sitting in the first row of seats and the struggling students in the fourth row.

Students who did not have the answer to a question were required to stand. Students faced teasing from peers when they were standing. The first row students were expected to tutor the fourth row students, but could also demand favors from them in return. Graduation was conducted in the same manner, with the high achievers receiving their diplomas first. In this arrangement, everyone knew their place in that community, and avoiding shame was a motivator.

All students were expected to contribute to the functioning of the school by cleaning and growing plants. Students did janitorial work with frugal supplies such as
coconut husks for scrubbing, remelted candle drippings for floor wax, and banana leaves
for polishing. There was an emphasis on looks, and teachers would whack hands with a
ruler for dirty nails. Respect for the teacher and hard work were expected from everyone.
In comparing their experiences in the Philippines to what happens in Hawai‘i, this group
saw good aspects for each system. They also saw second generation children in Hawai‘i
as spoiled and lazy compared to their own experiences.

*CHW Focus Group*

Over another lunch hour, this time during a regularly schedule team meeting of
the adult medicine team, all of the CHWs were invited to a focus group. The purpose of
the meeting was to educate the adult medicine team on ethnomedicine for their clients,
and to explore ways to work together better with the CHWs. In requesting this forum, the
adult medicine team was wishing for more independent case management of clients by
the CHWs with nurses and physicians available for training and consultation. All six
CHWs were there, representing Chinese, Filipino, Korean, Micronesian, and Vietnamese
cultures.

The Filipino CHW shared that people in the Philippines would go to faith healers
first before doctors, and were more aware about their health and knowledgeable about
their illness compared to the clients of the other CHWs. She also observed that people
took bitter melon to decrease blood sugar, and were afraid that taking too many
medicines may have a negative effect on the body. In Filipino language the word sugar
only refers to granulated sugar used in coffee, and she had to explain to patients the
concept of “sweetness” in the blood.
The group was asked what problems their respective group of patients had in taking medicine. The Filipino CHW admitted that sometimes patients don’t tell the truth, and are less likely to take all of their medicine if they are taking multiple medications. Compared to the other Asian and Pacific Islander groups represented, the Filipino CHW felt Filipino patients decide to just not take medicines rather than self-adjust doses, and are less likely to share medications with friends and family. All CHWs felt that their patients were more likely to listen to their friends than their doctors. They agreed that the problems of medication compliance for self-management with diabetes are many and difficult to overcome. Interventions with the entire community seemed necessary to have an impact with friends and family of Filipinos.

CARE Education Program

The Community Approach to Responding Early (CARE) program has been an ongoing program at CRC since 1999. The program targets middle aged Filipino women for breast and cervical cancer screening and uses a cultural tailoring approach. Program development was informed by an in-house Filipino Advisory Committee at the CRC. Cultural values were incorporated by having a social, party-like atmosphere in a non-medical setting with Filipina staff who interacted in a karinosa (caring and friendly) way.

On a Saturday morning 15 Filipinas gathered and filled CRC’s lunchroom, with six Filipina staff welcoming and assisting with setting up and registration. One of the Filipina nurses started the session with an ice breaker. The women introduced themselves by stating their names, how long they had lived in Hawai‘i, and where they came from in the Philippines. The introductions were punctuated with statements like,
“Oh, I have a sister there” or “I am from there, too.” At the end of the introductions, another nurse showed a map of the Philippines and pointed out how the group had come from all over the country.

The next activity was completing an individual pre-test in English with all staff circulating to help individuals with this task. After a while, the test became a group pre-test when they would talk over the questions and their responses. There was much laughter about the questions about healthy diet and when one woman acted out what a Pap smear was. After a question about multiple sexual partners as a risk factor for infection, one woman stated she didn’t need a Pap smear because she had not had sex for 10 years.

With some difficulty, the Filipina nurse got everyone’s attention again and polled the group about preferred language. Proceeding in Taglish (a mix of Tagalog and English), she made a formal presentation with posters in English, covering myths (“It is a sin to touch your body. That is the belief of the Filipino”) and recommendations and reasons for screening. She posed questions to the group (How often should you check your breasts?) with many responding. When directed, the whole group stood and stretched and bent forward in maneuvers recommended for breast self-exam. When polled, many more raised hands to show they had had a mammogram than for having had a Pap smear.

In concluding the session the health educator conducted sign ups for the next group clinic, and encouraged recruitment of friends and relatives for the clinic. The women were given a plastic gift certificate to a local drugstore chain as a token of appreciation. Instruction on how to use the credit card like a gift certificate and advice to
wait for a sale were mentioned. The women left with many good-byes and covered food plates of left over *merienda* (light snacks), as if leaving a party rather than a health education session.

On another afternoon of the CARE program clinic, a few women were waiting in a conference room to be called in by the nurse midwife for their gynecological exam. During the wait a Filipino movie was shown on the VCR, a love story set in the country in which a young man returned from the city to visit his father in the country. While there he fell in love with a country girl who worked for his father, and he wound up giving up his job and modern girlfriend to return to the country life and his new love. During the story the midwife entered and asked of the next patient, “Do you have a uterus?” Later the midwife confided that a previous patient thought she had only had an ovary removed, but had actually had a hysterectomy as well. This same confusion about female body parts came out in the health education party as well where was much discussion about the location of the uterine cervix and the importance of the intact hymen for women planning to marry.

*The Diabetes Clinic*

Every Wednesday morning from 8 to 10 a.m. people with diabetes come to the Diabetes Clinic held in the conference room of CHC. Started four years ago for uninsured Filipinos, attendance at the clinic was used as a measure of the success of a media awareness campaign in the Filipino community. The venue also provided a place where people diagnosed with diabetes at screening events could come for education and treatment. Four months after its opening the clinic expanded to include all people,
insured as well as uninsured. The clinic was staffed by the investigator and a Filipino nurse, both of whom supervised graduate and undergraduate nursing students who provided the services. 

Most mornings, five patients might be waiting while the nursing students checked blood pressure, blood glucose with a glucometer, and did a foot exam for new patients. Two nurse practitioner students counseled patients about their self-management, adjusted medication, ordered lab tests or immunizations, and made referrals to the optometrist, nutritionist or back to the nurse for glucometer instruction. Flow sheets of results and a table on self-management goals in the areas of diet, exercise, and medication were kept in clinic folders for easy reference. The patients were helped by eligibility workers and a medical assistant who signed patients up for patient assistance programs with participating drug companies once their blood pressure and blood glucose levels were controlled. Sample medications, low cost first-line medications, and Gift Medicine or IHI coupons redeemable at a nearby pharmacy were the day-to-day multi-level system for providing a regular supply of medications to uninsured patients with varying financial situations.

On one morning early arrivers were appraised of an upcoming annual conference for people with diabetes at the Hawai'i Convention Center to see if they wanted to apply for scholarships from the sponsors. A Korean man asked about his favorite nursing student who had stepped out of the room. Conversations with the nurse practitioner students were focused on the medications being given, how and when to take them, and recording changes in dose and amount dispensed in the medical record. If samples were not available, patients were given the option of taking a prescription to purchase the

66
medication or switching to an available, similar medication. A CHW came in with a client and announced, “I have a new patient for you” who was predictably uninsured. Pieces of advice such as “too much starch is not good” and “you’re 331 today and that’s a little high today” were spoken softly but were audible to all. Each patient heard similar advice repeated several times during their wait.

Two middle-aged Filipinos came with the cashier for Visayan interpretation. They had been referred by a Department of Health program for new immigrants to get screened for diabetes. They had normal blood glucose readings, a relief because by now the conference room was over capacity. Other common messages from the nurse practitioner students were “Now bring your numbers and medicines back next week.”; “Do you check your feet every night? If your feet are numb, you may get a cut and not feel it.”; “Is she still visiting? What is it you are snacking?”; and “You can control it but it’s not cured. You can control it with diet and exercise.” As they leave, the patients said thank you and goodbye to each person staffing the clinic and to other patients they recognized from previous visits.

At another clinic the young Filipino-American nutritionist spoke to 11 Filipina patients about a healthy diet for people with diabetes following the food pyramid as a guide. In the warm, crowded room many questions were raised related to the presented content. The women were seeking verification of their understandings, with questions about diet soda, green tea, 2% milk and prune juice. The questions were all about whether a particular food was good. The nutritionist put foods in a context of comparisons, saying having an extra fruit may not be good but it was better than eating babinka (a rice pastry) if one just had to eat something sweet.
The women sought black and white answers about what was good to eat, a topic full of relativity. The woman who asked the most questions seemed the most knowledgeable about nutrition, but was also the most obese. The nutritionist used plastic models of food to demonstrate serving size for fruits and rice, and the hidden fat and sugar content of certain foods. She recommended that people eat a variety of starches rather than only rice, and told people to avoid only a few food items, namely fried pork fat, bacon, the seasoning packet in packaged saimin, fruit flavored juice drinks and regular Spam. There was a side conversation about sending a case of Spam to the Philippines for people who did not have diabetes, and the shipping costs. The nutritionist used food labels to show the fat content of Spam vs. Spam Lite.

At the end of this session, the Filipina nurse recruited participants for the Ways to Feel Better workshop. She appealed to the audience’s strength as Filipinos in being able to control their diabetes. She showed an earlier edition of the Fil-Am Courier with a photo of the first class holding their certificates to demonstrate the importance of this endeavor. One woman said, “That is correct” after the nurse said, “We can do it!” Six of the 11 woman at this clinic did sign up for the workshop described in the next section.

**Chronic Disease Self-Management Education**

Six Filipinas attended a six week program called “Ways to Feel Better” and two of those women participated in the study. Based on social learning theory, the program was designed to increase participants’ self-efficacy for self-management behaviors related to their chronic disease. The workshop was not a disease education course, but rather a goal setting and problem solving experience in which participants helped each
other. Each week an action plan for the upcoming week was made, and each participant reported the following week on how they did. If not successful, others at the workshop would offer suggestions, and the participant would choose the most appealing suggestion.

The workshop was co-led by the Filipina nurse and by the Filipina CHW. At this first meeting, the participants introduced themselves and were asked to share their feelings about their chronic conditions. All of the women had diabetes, and some had other conditions such as hypertension and arthritis. Some chose to respond in a Filipino dialect, and for the benefit of the investigator the nurse interpreted their responses. The most common feeling was fear, then sadness and worry. The nurse told the group they would learn how to deal with their feelings in the workshop.

The CHW next gave an overview of the workshop and the responsibilities of a self-manager. Participants were fully engaged and paid rapt attention. The nurse next spoke in three dialects about our paths in life and how we choose what we do, saying “You can choose to be a good self-manager or you can choose to wait until you die...you have to do it, I cannot do it for you...You might say, I can’t go, I have to work, I have to send money to the Philippines...you can still work, you can still have a social life.”

After listening to the difference between acute and chronic illness, one of the participants said, “If we didn’t come here, we wouldn’t know this.” During the break for the session, pop music was played and participants talked and danced and ate fruit together. Even though this was their first time together, participants showed much openness in sharing their feelings and supporting each other in their efforts to learn and improve.
Quantitative Data

The participants included two men and nine women, ages 53 to 76, with a median age of 62. The number of years with diabetes ranged from two months to 22 years, with a median of five years. They had immigrated from the Philippines to Hawai‘i between three months and 32 years ago, with the median of seven years. All but two participants were employed outside of the home. The oldest participant was disabled by a previous stroke, and another woman was in frail health because of a previous TB infection. The reasons for lack of insurance were primarily that their jobs were less than 20 hours per week and did not offer benefits, or that their income was too high to qualify them for either Medicaid or the Immigrant Health Initiative if they had immigrated after August 22, 1996. In two cases the participants were in the process of becoming partially insured through IHI, or reinsured after being temporarily dropped from Medicaid because of missing documentation which had to be obtained from the Philippines. Quantitative data about the participants is presented in Table 5.

Participants sorted evenly over the different factors which were a priori identified as potentially influencing the ability to self-manage as shown in Table 6. Participants were identified by numbers 01, 02, 03, 04, 05, 06, 07, 09, 10, 101, and 112 in chronological order of their inclusion in the study. The eighth interview with a woman referred by her sister-in-law was not used because the woman had insurance.

Five of the 11 participants had attended a chronic disease self-management workshop offered on two occasions at CHC in 2000 and 2001. The investigator was a co-leader for the first workshop in 2000. The workshops were called “Ways to Feel Better” with chronic conditions. The investigator was a Master trainer for the two Filipino
workshop leaders who were a nurse and a community health worker at CHC. All of the study participants who attended the workshops were women. This workshop influenced how they articulated their self-management strategies, but did not positively affect the HgbA1c levels of the attending participants at the point in time when their HgbA1c was measured. The average HgbA1c for the workshop participants was 8.2%, and for the others 7.3%.

Qualitative Data

There were 1,113 significant statements from the 11 interviews with participants. Those statements sorted into four domains with the number of significant statements in each domain indicated in parentheses: barriers (89), explanatory model (129), family (410) and self-management behaviors (485). Within each domain there were three to seven categories which had one to ten subcategories. A full listing of the code book and the code tree are included in Appendix D. A table combining the categories and subcategories with the number of significant statements in each is shown in Table 8.

The Domain of Barriers

There were five categories for the domain of barriers with the number of significant statements following in Parentheses: cultural (29), financial (27), job problems (24), insurance (20) and hunger (7). The fact that this was the smallest domain may have been related to the questions in the semi-structured interview. These categories are presented in descending order of the number of significant statements in that category.
Cultural Barriers

The barriers which participants described as related to being Filipino were problems with refusing sweets, alcohol, soda, and rice, as well as the temptation to overindulge at parties. Three participants mentioned Filipino sweets as a common item in the diet:

“...being a Filipino we eat a lot of sweet.”
“...you know us, we always make rice cake. But I don’t eat them any more.”
“Us Ilocanos, we have this culture of making a lot of rice cake, like tupig.”
“Even if I go to parties now, I don’t eat things that Filipinos eat, mochi or homemade candies.”

Soda was another item which was stated to be commonly available and consumed both in the Philippines and in Hawai’i. Three other participants described soda in these ways:

“...in the Philippines, I have already diabetic, because we always drink soda, yeah...Coke, especially Coke, because that’s the water of the Filipino.”
“My style of eating [changed], because before I only used to drink soda.”
“I’m fond of the sweet, the candies like that – the Coke is the sweet one.”
“My friend [a Filipina with diabetes] likes to drink soda...that’s why maybe her legs are black.”

Rice was a food which three participants described as a customary food integral to the Filipino diet:

“I find when I go walking, the more rice I like to eat because of the energy.”
“...we usually eat rice three times a day and, if we work hard, the more rice we take in because the more energy we exert...we are used to eat.”

“But my father [who also has diabetes and lives in the Philippines] maybe has a different lifestyle because you know already that I used to eat rice – and they crave for it, they can hardly cut it off, because dad old already.”

“But my father [who also has diabetes and lives in the Philippines] maybe has a different lifestyle because you know already that I used to eat rice – and they crave for it, they can hardly cut it off, because dad old already.”

“Because for food, they [friends in the Philippines] just eat anything. Because they don’t have anything, just rice.”

“Because for food, they [friends in the Philippines] just eat anything. Because they don’t have anything, just rice.”

“Because over there in the Philippines, because I am a country lady, I go to our rice field, to our vegetable garden, I help my brother and father. I sell our vegetables in the Philippines, like that.”

“My son over there [in Seattle] he hardly eat rice. Over here when he come home, you know last Christmas, he doesn’t like rice. He like only, but expensive you know, only American food.”

For the men only, drinking alcohol was an expectation that went along with socializing with other men. The two men curtailed their social activity since learning about their diabetes. Both recognized that too much alcohol was problematic for their diabetes. The participant who had diabetes for 22 years decided to give up alcohol, while the newly diagnosed participant was practicing moderation with alcohol.

“Especially drinking...I don’t drink anymore. Before, I go that, uhh, those drinking session. Drinking – drinking, uhh, like the liquor – the beer.”

“I try not to go out very often now...I might be tempted to eat what other people eat and then I might be drinking more, rather than what I drink.”

“I go out with my friends – we go down karaokes (private rooms where customers sing and bring food and drink). Uhh, we go down single bars or bars – what have you. [The alcohol] is a problem.”

“But I ate the – last night I had – I went drinking with my friend last night and I ate some – you know, what kind food they get in there – all the – they call it pupus (appetizers) and I ate some, so.”
Financial

Financial barriers were identified by seven participants as the inability to afford to see the doctor, buy medicine, or pay the bills for hospitalization if required. Looking back on their lives in the Philippines, two participants contrasted their lives in Hawai‘i as better off financially:

"My – my oldest brother [who had diabetes] – eldest brother – we cannot afford to buy medicine – and he died."

"If they have money [in the Philippines], they go to the doctor. If they don't have money, then they just let the diabetes go untreated until such time that they will amputate their feet. Because amputation costs 50,000 [pesos] and they don't have money. So they just leave it like that... No money, that's why ... My friend in the Philippines. She's just counting days before her amputation. She doesn't have money, that's why ... We pay. Nothing is free in there ... Nothing is free if they amputate."

Q: Is she [her friend in the Philippines] changing her diet like you do? Is she exercising like you do?
A: No. Because for food, they just eat anything. Because they don't have anything. Just rice.
Q: So they can't – just rice.
A: No money... When I came here, that's when I changed. Because when I was in the Philippines, I don't have money. You cannot change – you just eat anything. You cannot buy anything. Too expensive.

Although better off financially in Hawai‘i, three participants also presented the dilemma that recommended medicines, medical visits and glucometer monitoring negatively impacted the financial benefit of living in Hawai‘i:

"In the Philippines they are not concerned about diabetic, yeah. What – so where shall I get money if something happens to me?"

"And sometimes – so – especially when I'm not here in Palama – but expensive the medicine, the doctor, and I have no insurance... My husband, uhh – my husband helped me for that and I have – I have work, too."

"That is one of my problem. How – how can I [afford] this medicine... Because I have to – if I have to wait [for] that one– and the other, uhh– expensive. Too expensive... That's
one of my problem. Yeah, because, uhh, when there is [no samples] – mostly all this money that I'm saving I am buying medicine...So I'm lucky I'm – I come here in Kalihi... And sometimes, uhh, our medicine is not too much high.”

Two participants made compromises about what they did for self-care:

“I don't use it [glucometer] because no more battery... 'Cause it's much, umm, much... Expensive today.”

“And plus I – I check every morning. But you know the thing is so expensive... So I try only two, three times a week.”

“Because I wanted to swim – because swimming, yeah. But it's so expensive [at the health club], so I just you know walking.”

For one participant, American food was viewed as healthier, but too expensive:

“Especially my son – said over there he hardly eat rice... he doesn't like rice – he like only – but expensive, you know – you like only American food.”

Three participants recognized that seeking care at CRC reduced financial barriers with free medicine and services:

“They [CRC] give you, you know, free medicine like that.”

“One of my friend... Yeah, she likes to come here ... But sometimes she – no time [to come to the free clinic on Wednesdays] so she will pay.”

“I have no money, so I cannot go to the doctor.”

Two participants who felt financially secure with job income reported or foresaw difficulties with finances:

“I will get ill it's – if I get really sick it's my concern. How I will pay bills?”

“When I cannot pay my house I wanted to bring out my [retirement money] – but the lady said, no, this is for your retirement... So I cannot help – I lost my house. So I cannot help – you know – do anything. But at least it's helped my-- you know, my health.”

“So I wanted to fight [the job problem], but my son said no – enough already. Just – say that to me – just work, he said – I will bring you money. But I don't know.”
In summary, participants identified financial barriers to self-management behaviors both in Hawai‘i and in the Philippines. Participants made compromises about self-monitoring of blood glucose, type of exercise and food choices because of lack of money. Those with higher income were more concerned about future finances, perhaps because they had more to lose if ill or disabled. Some financial barriers were reduced because participants were patients at CHC, since they received free medicine and visits (but not lab tests, hospitalizations, or emergency care). The reduction of financial barriers in the present may have been the reason for the focus on future barriers.

**Job Problems**

Jobs were a barrier to self-management if the job did not offer health insurance. Two participants voluntarily chose jobs that did not offer health insurance (taxi driving and childcare for grandchildren), even though they had options of other employment which offered insurance. The taxi driver enjoyed the work and flexibility to help his wife on dialysis, and the grandmother wanted to help her children. Two other participants considered their jobs (seaman and senior companion) as problematic. Even though they enjoyed their jobs, the jobs were problematic because of restrictions on health insurance previously presented.

“I did not have any more [insurance], ma'am, because I quit from Continental in April...And I discovered that I got diabetes in November.”

“Uhh, when I had – went for my – my annual physical check-up for taxi drivers – which is required by the City and County. That we had to under go physical check-up – and that's how I find out that my blood sugar was up. And I went for a test. And they told me that I have diabetes.”

76
Job problems were mostly related to hours and conditions of work which interfered with the participants' exercise and eating routines, or with the participant's ability to get a full-time job:

"But I swing a lot. I practice sometimes when - we're not doing in the airport I practice swinging the [golf] club."

A: No, umm, my children go to work five-fifteen in the morning. And I wake up the kids [her grandchildren] at six-thirty. I give them breakfast and they fix themselves and then the sister-in-law of my daughter...[she takes them to school] at seven-fifteen...they will just drop them off again in two-thirty.
Q: Oh, but you need to be home...When they get home. I see.
A: That's why I cannot work [full-time]. (laughing)

Only one participant described a difficult interpersonal problem with her supervisor. She felt mistreated and misunderstood in what sounded like a cross-cultural communication problem. She eventually left that position, only to return 18 months later to the same place of employment with a different supervisor:

"But I wanted to fight – but I don't wanna make trouble already you know to myself. But they said, you know, I have the right yeah. Because, umm, I not – I not very make – I never make problems with them – they are the one make trouble to me...So how – why should they put me like that...So I wanted to fight, but my son said no – enough already.”

"We are really close family tie – my mom – so we [inaudible] my father. That's why sometimes if your family raise you – they are so nice –I cannot alright what they doing to me, but you know. Uhh, so...I don't have any records. I'm nice lady that, you know – but can't help people you don't know. So the only thing is I try my best to work, you know...[inaudible] because I'm vomiting like that because if you are you know thinking – you know sometimes – I dream bad dreams like that – you know, nightmare. But you know, my boss – you know making like this – oh, I cannot sleep. And I cannot eat.”

For the men with jobs which required regular physical exams and reasonable control of chronic health conditions, jobs were both a benefit and a problem. For both men, their diabetes was discovered during routine check ups which gave them the benefit
of early detection of diabetes. However, their future employment was jeopardized by this diagnosis:

"Uhh, it's quite – give me a little problem. Because, uhh, every time I apply to a job they find out that I have sugar in my blood, but especially if you're a seaman you have to go to check out everything...Uhh, every time that we are going to ship out, they have to check-up...""

The disruption of one's schedule was especially difficult for the nurse’s aide who worked rotating shifts. Her attendance at church and the free diabetes clinic on Wednesday morning were impacted, as well as her energy level:

"And then the food too. But sometimes – you know – my shift thing is about – now I work days yeah. And then I gonna go work nights again – weekend. That's why I hate – I hate, uhh, nights because the whole day almost like to sleep."

"The only thing is because if you're working sometimes you work Sunday – cannot help. Sometimes I'm working, yeah – if Wednesday. So yesterday I try to get up early, because I work evening and then you sleep...You sleep late, you know."

A: So if I work days at least I can exercise in the working place...I want to push patient, you know...You know, walking – walk like that to check the patient you know. Do some recreational to the patient. At least I perspire. But if you work nights...I sleep, sleep. Look like my – my whole day is not good. That's why – but. Anyway.
Q: Is that because you're low on the seniority?
A: I lost my seniority – that's why I work the junk...
Q: So you have to work more nights.
A: More nights.

Jobs were also described as a barrier when people with diabetes were working both a full-time and a part-time job. One participant described an interaction at work with friends who also had diabetes:

"I'm telling the story about them. ‘Oh, where are you going?’ ‘Out to [CHC]’. We started there every week,' I say. They said they like to come back there but no more time because they work full-time. Then after the full-time, they go to the part-time."

Time was a sub-category of job problems. Limited time to exercise and for medical visits was mentioned by four participants. Job requirements limited time
available for self-management activities, but even the unemployed participant had
constraints on her time for an afternoon exercise routine. Rotating day and night shift at
the hospital interfered with productive time for the nurse’s aide.

“Umm, if I have time, I go. In the afternoon — though sometimes I cannot do it if I have
other things to do. And — but I’m trying to exercise.”

“And sometimes, uhh, when I have time I do a little exercise — practice sometimes when
— we’re not doing in the airport — I practice swinging the club.”

“At least I perspire. But if you work nights... I sleep, sleep. Look like my — my whole
day is not good. That’s why — but. Anyway. ...I lost my seniority — that’s why I work the
junk... More nights.”

Insurance

Lack of insurance was perceived to be a barrier to both full access and to peace of
mind for all participants:

“...and I have no insurance...so where shall I get money if something happens to me?”

“...what I’m concerned of is that I don’t have insurance and if my diabetes will become
worse, then I don’t know what to do.”

“Well, they [her children, her sponsor] were also stressed, because they — I don’t have
insurance and then they know other — they know also that diabetes is a serious disease.”

A: I always think of it also if I don’t feel good.
Q: Can you talk more about that? What do you think of...
A: Well, I’m thinking of my family. I’m thinking that I don’t have any insurance or what
— so where shall I get money if something happens to me?

One participant worked in jobs where hours were purposively kept at 19 per week
to avoid the state mandated health insurance benefits:

Q: Have you ever asked them about that?
A: Oh, we asked but... They will — when I [work full-time]. We work only nineteen
hours. But now I transfer already to senior citizen. We put twenty hours, but no go...no
go insurance.
CHC was seen as a place accepting of uninsured people. Two of the participants had been diagnosed with diabetes by private Filipino physicians. The desire for access to a private doctor, which health insurance allows, was also evident for them:

“I hope that [CHC]'s program will not change – that it will always be here to help us – who doesn't have insurance.”

“She get a doctor, because her husband have an insurance.”

Two participants identified friends who were insured by their spouses:

“Yeah – although I don't have any benefits, but – I really enjoy driving taxi. I enjoy meeting different people every day. Uhh, how has he [his taxi driver friend who has diabetes] get her insurance, I guess, is because his wife works and I think the wife covers him...Because us taxi drivers don't get medical insurance.”

A: My other brother and his wife – they inject insulin every day. The other just takes oral medication.
Q: OK. And besides their medication do they do anything else for themselves to take care of diabetes?
A: They have other medication, they have insurance, they are working.

Keeping insurance was not always possible. One man became uninsured because he was unable to have enough time at sea to fulfill the union requirement for insurance. His renal failure caused by his diabetes and hypertension disqualified him from working.

One woman voluntarily resigned her job with insurance to provide childcare for her grandchildren so their parents could both work:

A: I have been working at the Continental Honolulu Kitchen, ma'am. We pack foods for the passengers for the past three years. Since '96 to '99...But I quit the job because of the kids [her grandchildren].
Q: OK. And when you had that job before, did you have health insurance with that job?
A: I have... I did not have any more, ma'am, because I quit from Continental...

A: Uhh, if I can go back to work in a seaman, our union providing us, uhh, free – free medical...No, if I have to go to the sea. If I have, uhh, sea time. If I don't have enough sea time, they will not – will not provide.
Q: How much sea time is enough sea time?
A: Uhh, about ninety days.
One participant mentioned that life insurance gave her peace of mind regarding her son attending college in Seattle on scholarship:

"Plus I scared, you know, something happen to me. But anyway that's why – I have my life insurance, but – I need to see my son."

In summary, lack of insurance was mentioned by every participant as causing stress about the financial future for themselves and their families. Being uninsured was also seen as a barrier to seeing a private doctor but less of a barrier to care from the CHC. Insurance was just out of reach for one participant given only 19 hours of work per week, and for another who could not work enough hours because of disqualifying for assignment because of his diabetes complication.

**Hunger**

Hunger was another category within the domain of barriers. Hunger could have been categorized as a symptom of hypo- or hyperglycemia, but none of the participants tested their blood glucose when hungry to verify hunger as a symptom. Hunger was categorized as a barrier because it caused participants to not follow their intended or recommended food plan. Three of the participants reported feeling symptomatic when hungry:

"Hmm, when I'm hungry I tremble. I don't know –well, I guess if I'm hungry, I'm shaking. So that shaking when you're hungry, is the worst part."

"And I'm always hungry if I will not eat regular –like that. My body's trembling if I got hungry. But now it didn't."

"That's why sometimes I have just cracker. So that, you know, if you feel hungry. You know, I can – I don't wanna be shaking, you know. So because I eat not much you know..."
lunchtime. So what I did is - I just eat this and then I drink water...But before I come over here [for her interview] I eat one chocolate.”

Other participants reported feeling hungry (or attributed this to others with diabetes) and would eat to satisfy that hunger without knowing whether poor glycemic control was the cause of their hunger:

“Sometimes I – I feel hungry in the midnight.”

“And then this guy [a Filipino patient at the Diabetes Clinic] told me, oh, I'll just eat whatever I can. That's okay, because I'm hungry.”

“Sometimes it’s like I'm not satisfied. Especially rice.”

For all of these six participants, doing what was natural (i.e., eating when hungry to avoid the feeling of hunger or shakiness) was a barrier to optimal self-management in that none reported validating a low or high blood sugar by testing blood sugar.

In conclusion, the barriers of job problems, time, lack of insurance, and finances were intricately connected. Jobs were sometimes the key to having health insurance. Jobs with certain hours were also a barrier to going to medical visits or sticking with a diet or exercise routine. Some jobs required regular health examinations for clearance to work. While participants benefited from early diagnosis of their diabetes, they also could be banned from working if they did not meet the company’s requirements for control of their chronic disease. One participant lost his health insurance because he had not been allowed to go to sea at all during the preceding calendar year.

Cultural barriers were related to diet and social occasions. Hunger was portrayed as something to be avoided. None of the participants reported checking their blood sugar when hungry to see if the hunger was caused by their diabetes. Participants related financial barriers to self-monitoring blood glucose. The retail cost of one glucometer test
The domain of explanatory model was planned to emerge from the first five interview questions. This domain had three categories with the number of significant statements indicated in parentheses after each category: pathophysiology (62), diagnosis (49), and etiology (18). Eight of the participants had their initial diagnosis of diabetes made in the U.S., and the other three were diagnosed in the Philippines. Three of the women were hospitalized in Hawai‘i at the time of their diagnoses, two with infection (tuberculosis and pneumonia) and one who was not certain about the reason for her collapse (possibly hyperglycemia and dehydration). The categories are presented in descending order of the number of significant statements in that category.

Pathophysiology

Participants described the pathophysiology of diabetes by its complications and its symptoms. Complications were defined outcomes which occurred or could occur because of diabetes. Symptoms were defined as sensations experienced from diabetes. No participants mentioned chronic renal failure as a complication, even though one of the men was in Stage 2 renal failure. Although the cardiovascular diseases of myocardial infarction and stroke have been statistically the more common complications of diabetes for all populations, these were mentioned less often than amputation, blindness,
premature death, and skin problems. One participant attributed her hives from eating shrimp to her diabetes because the problem began after her diabetes onset.

Complications

All participants mentioned one or more complications. The most often mentioned complications were externally apparent microvascular ones, blindness and amputation:

“If they don't have money [in the Philippines], then they just let the diabetes go untreated until such time that they will amputate their feet.”

“I scared to be blind… But nowadays I'm okay with my eyes, though.”

“And that – as I said, if it – you get diabetes, it cause your blind, it cause your death…”

“But the doctor said, I don't want you to get you know – you know you cannot see or something you know happen to your eyes like that and then – you know your feet like that so…”

“I have a best friend in the Philippines. She's just counting days before her amputation. She doesn't have money, that's why.”

Early death from several causes (stroke, diabetes itself, heart attack) was mentioned by five participants, two of whom had brothers who died from diabetes:

“My – my oldest brother – eldest brother – cannot afford to buy medicine [inaudible] – and he died.”

“I was worried 'cause it might cause my sudden death.”

“Well if untreated, then you might die.”

“And my other brother died three days ago. When he came here five years ago, he was diagnosed with diabetes and he die three days ago at St. Francis… I don't want to die yet and I don't want – I'm not following in his steps. I don't want to die yet.”

“I scared to die. You know what my son said? Mom, without you I will follow you…”

“Yeah, but now I don't eat too much with the shoyu, like that. I'm trying. Because I scared to die early.”
“All of the sudden I get headache and then you know I can feel – so I said please I don't wanna die.”

Skin problems were another complication of diabetes identified by two participants. Black legs may have been venous insufficiency unrelated to diabetes. Sores may have been skin infection to which people with diabetes are more susceptible. One woman thought her hives were worse since she was diagnosed with diabetes, even though unrelated.

“My, uhh, my other friend [who has diabetes], umm, the legs are becoming black. What do you think is that?”

“Everything and –like, uhh – oh, it's – you get sores all over –I think that's it – I think it's a part of it.”

“Sometimes if I, uhh, eat shrimps or, what do you call that [hives] sometimes it will get allergic.”

Four other participants identified hypertension, hyperlipidemia, and stroke as complications of diabetes. Susceptibility to infectious and other diseases was mentioned once.

“Then my blood pressure medicine and then plus my cholesterol high.”

“I just learned that it's not good to eat too much because it will cause you a lot of diseases.”

“He [her father] passed away already. He had high blood pressure and diabetes. And he had stroke.”

“I risk myself... I – I may develop other diseases.”

“I don't know. It's just that it was sudden that she [her friend] felt sick. She had fever and chills.”

The need to inject insulin was viewed as something to be avoided, but something which could be necessary, especially if a person did not take care of themselves.
"My other brother and his wife -- they inject insulin every day."

"I think they have some problems -- like people I've seen that I will go to -- they call it insulin -- and I wish I don't go to that extent."

In summary, all participants were aware of complications. The emphasis on microvascular complications was misplaced, however. Risk profiles for this population have typically shown heart attack and stroke as the complications with the highest risk. Because blindness and amputation are more physically apparent and related to body image, participants may have been more aware of these complications than dialysis or coronary artery disease.

Symptoms

There were 17 specific symptoms which participants describe as related to their diabetes. All but one newly diagnosed participant mentioned having symptoms. Most commonly mentioned were the symptoms of hyperglycemia, excessive urination and thirst.

"Sometimes I'm always make shi-shi (urine), like that."

"But now -- before I usually urinate four times -- but now, two times only. One at midnight and then when I wake up."

"When I wake up in the middle of the night, I go to the bathroom, and then I also feel sweaty."

"Oh, because before I used to make shi-shi (urine) a lot. And now, not anymore."

"Oh, cause I go shi-shi (urine) a lot and I keep waking up in the evening and then I cannot sleep."

"I feel weak and then I feel thirsty all the time. Thirsty -- I like drink."

"Before, I -- I'm always thirsty before, but not [now]."
"Yeah, thirsty like that."

The second most mentioned symptom was intermittently blurred vision when blood sugar was high. This symptom was different than the blindness caused by retinopathy which some participants feared.

"Uhh, yeah, especially my vision."

"It, uhh, affect my vision."

"I eat with the papaya. Whoa, I can feel like my – my eyes little get blurred...I said, oh my god, I said, I drink plenty water..."

"Uhh, some are the same –especially the vision. The – if you're a diabetic, your vision become blurry."

The symptom of weakness was mentioned by four participants. Weakness was attributed to worry or to a blood glucose level that was too high or too low:

"Well, sometimes I feel dizzy and sometimes I make – I feel weak."

"I feel weak and then I feel thirsty all the time."

"Well, sometimes I feel weak, because I'm always worried about my diabetes."

"Sometimes I feel so weak and so [inaudible]. I feel weak and then, that's all."

"...like before, that I feel so weak like that and I'm hurting – sometimes – I don't know. I don't feel good sometimes."

"Uhh, I feel weak and know, but when I get diabetes then I became weak – I don't know if I become weak when it's high or if it's low – I don't know."

The symptom of fatigue was mentioned by five participants. Fatigue was described as being tired, dizzy or a general feeling of malaise:

"I feel sometimes dizzy. I feel like tired."

"I feel tired easily. Fatigue."
"Now I feel that my body is weak. I easily get tired."

"...sometimes – I don't know. I don't feel good sometimes...Always feel tired."

"I feel sometimes dizzy. I feel like tired."

"My diabetes – I sometimes get easily tired."

The symptom of feeling dizzy was mentioned by four participants. Dizziness has often been described in the clinical setting as not quite vertigo and not quite lightheadedness, but more like malaise. Unlike weakness and fatigue, dizziness was a symptom which two participants related to a blood glucose which was too high or too low.

"Well, sometimes I feel dizzy and sometimes I make – I feel – I feel weak"

"...because sometimes, yeah, she [her friend with diabetes] is – feel dizzy. That's – but me, I did not feel dizzy – like now, yeah...She's always feel dizzy. Then hard to walk."

Q: And that made your dizziness better? Did you dizziness go away with the pills?
A: Yeah, it did help a little bit. Sometimes it go away, sometimes not.

"And I'm – I'm dizzy."

"Umm, I feel dizzy like that – I – I know that tells that my diabetes is bad – I don't know if it is high or low that time – but, uhh, when I'm in the hospital they said, if you dizzy it's low."

"When I check before – when I check with that – it's low – it goes to seventy, like that. They said, you're not – you're dizzy with that – no. But before – the first time – because it's high - yeah - my diabetes. I feel sometimes dizzy."

Itching was mentioned by three participants as either a generalized or localized problem when blood glucose was high.

"And sometimes my – I'm itchy...My eyes, but, uhh, this has been long time already...Uhh, sometimes it is itchy."

"I'm itchy."
“How come that, uhh, the butt is very itchy, I said to my niece I didn’t feel anything. I don’t feel anything – only the itchy thanks God there is no more the itchy part.”

“Only last year, but it’s still no more. Just the itchiness I always feel that – I started feeling that last year, but I don’t feel it anymore.”

Musculoskeletal problems were mentioned by four participants, and two participants felt that their diabetes was responsible for worsening their joint aches:

“Because sometimes my legs become cramps.”

“I easily get tired. It seem like my joint hurts a lot.”

“I feel my joints and my whole body is painful.”

“...I’m worried about my diabetes, because my knees are always sore and I think the diabetes is causing it…”

“You know, sometimes I’m not worried, because I don’t feel any…Only my sore - on my knees – sore...”

“What I feel right now – if I work hard, my body aches a lot.”

Three participants reported nervousness as a symptom which was worse at night:

“And I’m nervous at night even now.”

“And then - I feel hot, like that. For the past two nights, I – I’ve been feeling nervous – I don't really know why. When I wake up in the middle of the night, I go to the bathroom, and then I also feel sweaty.”

A: You know, look like my feet heavy. And then just like I easily – just like I get nervous you know. You can feel. [touces chest]
Q: Umm hmm. You feel it in your heart?
A: In my heart.

Good sleep was attributed to doing well with diabetes:

“I sleep good...Oh, because before I used to make shi-shi (urine) a lot.”

A: I sleep good.
Q: You sleep good - OK. Anything else? What do you mean by sleeping good?
A: Oh, because before I used to make shi-shi (urine) lot. So I sleep, umm, straight. I don’t wake up.
Difficulty with sleep puzzled participants. Three of them mentioned difficulty with sleep which was not attributed to nocturia, while one mentioned difficulty falling back asleep after waking up to urinate:

“Oh, cause I go shi-shi a lot and I keep waking up in the evening and then I cannot sleep...I don't really know much – except that I don't get enough sleep, good sleep.”

A: I cannot sleep.
Q: Can't fall asleep?...
A: Yeah...I cannot – I don't know why – I cannot – it takes me until two – twelve o'clock sometimes if I cannot – if I cannot be sleep.

“And then when I wake up ten-thirty – we go sleep eight-thirty, then I wake up ten-thirty, I know it's already – what I know is already morning time, but it's only ten-thirty when I go look at the watch.”

“I cannot sleep...Oh – it's a problem.”

Only one participant mentioned headache as a symptom which she hypothesized to be due to high blood sugar, but she did not test her blood sugar to know for certain.

She also related the sudden onset of headache as related to a stressful event which she believed also raised her blood pressure:

“Headache – sometimes I get head – maybe my sugar is up, I said.”

“...I'm telling you all of the sudden I get headache and I – I feel so nervous but I try to be strong. I try to be strong –please God help me – what I did is, I – I stand up against the world.”

“That's it – and then later on I massage my – because I know my blood pressure is high – become high. I know. All of the sudden I get headache and then you know I can feel – so I said please I don't wanna get stroke or whatever. So I try to help myself. So by then I calm down and then I drink cold water. I just [inaudible] then I stand up.”
Diagnosis

The participants who were not ill at the time of their diagnosis reported that their diabetes was diagnosed by a blood test:

“They did check. They did a blood check.”

“When I go to the doctor and get my blood test, they find that I have a high diabetes.”

“No, I went, uhh, before with other doctor. Then because I wasn't satisfied with the outcome of my blood test, I again went to Kalihi Medical clinic and asked them if I can get a check for my blood. And that's where I found out.”

“The doctor said it was caused by eating too much food and prohibited food. When I go to the doctor and get my blood test, they find that I have a high diabetes.”

Most of the participants mentioned their doctor as the person who told them they had diabetes, and the one who told them what to do:

“And, uhh, so I went to a private doctor – there I found it out.”

“I found out when I went to the doctor – Doctor Joaquin, umm, because I was feeling dizzy.”

“Well, he just told me I have diabetes and I – when I went there because he's my doctor.”

“I like to go to that doctor because I heard in the radio about diabetes.”

“...I think it was my second visit that the doctor told me that I have diabetes...I actually had not seen any doctor for how long I don't even remember, because I think I'm healthy.”

“Actually, he [doctor] just told me that I have – I am diabetic. Or that I have diabetes.”

“And I don't see any doctor except when I'm required to. But the doctors said it [diabetes] was easy to cure.”

The most surprised participants were two who had no relatives with diabetes and who felt fine:

“Oh, I was surprised – I was astonished that I find out that I had diabetes.”
“So they said to me that, oh you know your sugar is high – one-hundred forty-four – I say, how come – I said, because sometimes you know our LPN – can you please check our you know, like that... So it's normal – hundred twelve. So you know – but and there was – no one I – you know, am not watching the food I eat, because you know I'm not the health – because this – especially my family – we don't have, so. So I'm OK – then so I went to my doctor – I said, they took, uhh, blood you know FBS – so it's high. Says a hundred forty-four.”

“I make like his, how come – and I was so – I'm not – I'm not thinking that is diabetes already. So I call my brother [a physician in the Philippines].”

Participants' reactions to hearing their diagnosis were mixed. Some participants were concerned only after they came to Hawaiʻi, and reported that diabetes was not considered a serious disease in the Philippines. Others were reassured by their doctor or friends that diabetes was easy to manage:

“In the Philippines they are not concerned about diabetic, yeah.”

“Well, they [her children] were also stressed...they know also that diabetes is a serious disease.”

“But, uhh, before I did not, uhh – I did not mind it, because I don't know it is a serious disease when I was in the Philippines.”

“I have learned that, uhh, my cousins got, yeah. But I did not – as I have said, I did not mind it, because I don't know that it is as serous as this.”

“Oh, I was sad because I knew I was sick but the doctors said it was easy to cure.”

Three participants who were ill at the time of their diagnoses were diagnosed while inpatients:

“We will bring her in the hospital. That's why – my husband called my brother and my mother – get me and they bring me to the – to [the hospital]”

“I collapsed three times. And then for the third time that I collapsed they bring me in the hospital – Wahiawa [General Hospital].”

“And, uhh, the night time when I go – when I go sleep, I cannot breathe. So I went to the doctor...They tell me that I – I get pneumonia...When I operated in 1997 [with pneumonia], that's the time that they found out my diabetes...I was in the hospital for
about one month... I only found out when I was [inaudible] that I asked them, why do I have diabetes – and the doctor said that, that's how it is when you are sick and it gets complicated.”

“"When I came here, I went to Leahi (TB hospital) and Leahi was the one who told me that I have diabetes.”

In summary, most participants were diagnosed during routine screening or when relatively asymptomatic. The diagnosis was made by the doctor. Those who were ill at the time of diagnosis had infections which contributed to revealing their diabetes. Participants made the connection between their diagnosis and having a blood test.

**Etiology**

Most participants had relatives with diabetes. Heredity was cited by five participants as the reason they developed diabetes:

“Oh, maybe it is – my father got.”

“My father had diabetes.”

A: Oh. I had a family history of diabetes. My dad has diabetes.
Q: And can you tell me more about that your dad having diabetes?
A: He passed away already. He had high blood pressure and diabetes.

“He [her doctor] also told me because of my history of diabetes family history.”

“Because he said he inherits the bad genes. Maybe that was the cause -- that is what I know.”

Four participants also attributed the onset of their diabetes to changes in lifestyle which occurred after leaving the Philippines and living in Hawai‘i. The food in Hawai‘i and less physical activity were commonly mentioned:

Q: OK. What do you think caused your diabetes?
A: Eating too much.
Q: And what do you mean by that - eating too much?
A: If you eat too much, then - if you eat too much, I know that it's not good.

Q: What do you think caused your diabetes?
A: The food.
Q: The food in Hawai‘i.
A: Umm hmm.
Q: Yeah, what about the food in Hawai‘i.
A: Because before I eat - I like the macadamia nuts - chocolate.
Q: Oh.
A: You know my husband buying me always so - you know, even though I'm thinking you know, never mind.

"I know if I get hyperglycemia maybe I eat plenty - or even salty you know."

"...because when I was in the Philippines I did not have any heart problem too. Because usually I work, work, work there... So maybe I exercise. I had been a teacher for the past twenty years in the public school."

"But you know – plus, uhh, I don't exercise that time you know. When you become fat, you're lazy. But that's why – when my mom so here. Because over there in the Philippines – because I'm a country lady – I go to our rice field, to our vegetable garden – I help my brother and my father. I sell my – our – our vegetable in the Philippines, like that. Ahh, you know in the Philippines we have a car, but we hardly use – only my brother go to the hospital, like that if they have the emergency – because he's a senior consultant. He has a beeper – she has a car – my sister has a car, but us, you know, we love to walk. We go to the field to walk and that, so I'm used to – but over here my husband get car. Only [inaudible] – so we hardly walk."

Participants who were diagnosed with diabetes in the Philippines also attributed eating certain foods as contributing to the onset of their diabetes:

A: The doctor said it was caused by eating too much food and prohibited foods.
Q: And prohibited foods. OK. Can you tell me more about what did he mean by prohibited foods or too much eating?
A: He gave me some instruction, like eating foods that are not good. Like eating too much rice and I should eat more vegetables and I should eat more fruits. And he also told me that there are some fruits that I should not eat.

Being too hot, and sweating too much, were stated by one participant as reasons why diabetes might get bad and cause the need for medical attention

"I like it here because of the climate also. It's not like in the Philippines – it's too hot. The more you will get diabetes because it's too hot."
"Some people – they just said. I just heard from them that if your body is too hot, then diabetes will go up."

"In here, it's hot also, but it's not as hot compared to the Philippines. In the Philippines, it's too hot that when it really gets real hot, then I'm sweating too much. In here, I don't sweat. Somebody said that if my body gets too hot, then it affects my diabetes. My diabetes will go high."

Only one participant, who did not have a family history of diabetes, described his diabetes as a change in an internal process:

"Well, I think it's just from my immune body – how I – my body takes the food... So that's how I guess I develop diabetes."

In summary, etiology of diabetes for most participants was attributed to heredity, diet, and lack of physical activity. One participant attributed diabetes to a hot climate and sweating. No one spoke about insulin or the pancreas, but one man acknowledged an internal change in how the body handles food. His explanatory model may explain his strong interest in using a glucometer to measure his body’s response to food. One participant believed hot weather and sweating makes diabetes worse; her diabetes did in fact improve when she moved to Hawai‘i, but she also attributed the improvement to having more choices for her diet than just rice.

In conclusion, the explanatory model of type 2 diabetes reflected the Western model of diabetes regarding etiology (heredity, weight, lack of physical activity) and pathophysiology regardless of the length of time participants lived in Hawai‘i. Participants had a holistic view of the body. Some participants viewed any and all of their symptoms as related to their diabetes, even allergies and arthritis. They knew about potential complications from the experience of their relatives and friends, and feared an early death. They more often mentioned the more outwardly obvious complications
(amputation, blindness, taking insulin, stroke) and less often the more common problems of heart disease and chronic renal failure which are more prevalent in the Filipino population in Hawai‘i.

The Domain of Self-management

The categories for the domain of self-management behaviors were strategies for self-management, diet, maintaining roles, medication, exercise, monitoring, and medical visits. These categories will be presented in descending order by the number of significant statements in each category.

Strategies

There were 170 significant statements about the ways participants conceptualized and carried out their self-management. These statements were divided into eight categories presented as follows in descending order of frequency with the number of statements following in parentheses: control (31), moderation (25), change (23), prohibition (21), education (19), acceptance (18), trying (18), and avoidance (13). Strategies will be presented in descending order of the number of significant statements in each category.

Control

Control was the most frequently mentioned strategy with 25 significant statements. Nine of the 11 participants described using control in taking care of their
diabetes. Control was similar to self-discipline and being able to set limits. As with the
other strategies, control was used primarily with managing food:

“And then she [her daughter] told me that – you eat like this, like this, like this. Control. Everything control. Even you like to eat some more rice... You – you cannot eat like before.
But they [doctors] will not tell you that, you go exercise [inaudible]. And control your food.
So what I'm doing is, I exercise and I try to control my food so that I will not have those problems.”

“But now I'm trying to control it...Uhh, just control my, you know – to go on diet.”

“Even you like to eat some more rice...you – you cannot eat like before.”

“Not too much rice, banana, apple...”

“When I didn't have diabetes, I can eat anything I want.”

“Eating [food dish? - inaudible] and salty foods and something like that, but I guess it's not easy to, umm, not to take it if you want to.”

“Oh yeah, I cannot eat ice cream too much... Candy...And fruits – any kind of fruits I have to control.”

“I control. I don't eat as much anymore.”

“Yeah. I'm always watching for my diet.”

A: I'm not taking any medication. I'm just controlling by not eating too much...
Q: What you do eat to control it?
A: Not too much rice, banana, apple...

A: It's just that I'm controlling what I eat.
Q: Umm hmm. OK. And is controlling what you eat difficult or easy?
A: It's easy.

“They [her brother and his wife] don't have any control. They just eat anything and they just say they'll take medication...They eat ice cream with cake.”

“They're [his friends] always, uhh, complaining that they have diabetes but every time I – I saw them, how they eat their food – they [inaudible]. But I can – I can control.”

“I'm not taking any medication. I'm just controlling by not eating too much.”
A: Just controlling yourself and just following everything that they say which is not good.
Q: What do you mean by that? What is not good?
A: Bad. It's bad for your health.
Q: What things, for example.

A few participants related the need to control more than food. One's weight and exercise were included as well. Controlling everything, or being in control all the time, were described as possible goals. When it became difficult to practice control, one participant described thinking about the future and preventing complications. Another participant mentioned attending a chronic disease self-management class as helpful in developing control.

“And when I – I become a diabetic – so I control everything…”

“If it will make you worse. Yeah. You will forget that you have a hard time... To control, yeah.”

“Yeah, I think – I think I myself succeed because I try to discipline myself. If I say, no – no.
Those people, like, for example, those people smoking, I cannot stop – no, I don't believe that. Just don't light the cigarette -- you can stop...Oh, yeah – they – they can't control.
So they [friends with diabetes] said, they tell me that, you can control yourself, so I try to.”

“She was exercising too and she was controlling and she even liked dancing.”

Q: …What does that mean to have control?
A: That's what I'm saying. I just learned that it's not good to eat too much because it will cause you a lot of diseases. Because when I was there, I used to eat too much.
Q: And when did you learn that?
A: When I experienced becoming big.
Q: OK. And are you getting smaller?
A: I wanted to become slim, but I couldn't.
Q: Were you trying to lose some weight?
A: Sure. Of course.
Q: Of course. OK. Do you weigh the same now that you did, say, three years ago when you found out you had diabetes?
A: I lost weight, but just a little. I used to eat a lot. But when I attended the class, then I had more control. I don't eat as much anymore.

In summary, control was widely practiced by most participants. Of the two participants who did not mention control, one used prohibition as a primary strategy; the other elderly participant had limited mobility and her dietary intake was mostly controlled by her daughter. The message of “Control Your Diabetes for Life” was used in the diabetes awareness campaign in the Filipino media campaign. This message was developed by the National Diabetes Education Program sponsored by the Centers for Disease Control and has been translated into 10 languages, including Tagalog. Participants may have heard or seen this message in materials used at the Diabetes Clinic.

Moderation

Moderation was categorized as a strategy when a participant continued to eat, drink and socialize but with curtailed frequency or quantity. Moderation was used by 10 of the 11 participants. In the self-management task of eating, participants applied this strategy to both specific foods and to food generally. Specific foods mentioned were sweets, rice and fatty pork:

"Unlike before, I don't eat much anymore and I don't, umm, eat much of, umm – like, I don't eat much of those – much meat or sweets and rice."

"I do not drink too much soda – eat candy, like that."

"Just only pork. I do not eat the ones with fat already. I usually eat the lean or – and just three pieces or..."

"Rice also I cut off. Instead of three – three scoops or four before, I only use two..."

"...so I just try to walk, you know – just don't eat too much rice like that."
“...I will not stop eating the sweets, but a little bit, a little bit sometimes – not often.”

“Plus she [her friend with diabetes] only eat the small amount – small portion. So that's it. And she drank – drink lots of water – tea.”

Another diet related strategy was to limit portions but not for any specific food:

“When there is party, the – my children go some, but I never eat. I just eat a little bit, like that, just to satisfy my...”

“I just eat a little bit, just to... taste.”

Q: OK. What does she [sister-in-law] do to take care of her diabetes?  
A: Cut down the food...

“I don't eat too much every time. Especially in the morning, I don't eat breakfast – just only coffee.”

“And also I'm trying to limit what I eat...sometimes I try to – not to eat a lot.”

One of the men newly diagnosed with diabetes specifically mentioned cutting down the number of alcoholic drinks. He had not as yet obtained a glucometer for feedback on how the alcohol would affect his blood glucose.

“Try to – I tried to limit my number of drinks now.”

A: I used to drink more than two bottles of beer before.  
Q: Uhh huh.  
A: Now I limit myself, uhh, by two...If not, I will drink –maybe about a glass of wine or maybe a shot of whiskey. Before I – I am a hard drinker – I can drink a lot before.”

Two participants mentioned using moderation in their social lives. In the first case, eating was moderated at parties, and in the second case the number of parties attended was moderated.

“Sometimes we cannot – we cannot avoid to – to go in the party, but I don't eat too much.”

Q: Did you change anything in your life when you found out you had diabetes?  
A: Hmm, not really – moderately, yes I try not to go out very often now.
In summary, moderation was used as a strategy for self-management for food and social functions. Participants who used control as a strategy often also used moderation.

Change

Change was the third most common strategy mentioned by seven participants. Change as a strategy required an assessment of how life used to be compared to how life was now. Prevention was included in the subcategory of change when it involved a comparison of an imagined future with poor control versus good control. Two of the questions in the semi-structured interview guide asked about changes in their lives and changes participants had made related to having diabetes. Most of the changes made were about diet:

A: And I used to eat a lot of sweet. But now I don't eat that much anymore.
Q: Umm hmm. OK. Umm, what kind of sweet did you used to eat that you don't eat anymore?
A: Umm, just like rice cakes – 'cause you know us, we always make rice cake.

A: Change in my life?
Q: What change did you make?
A: Well, the eating habit.

“...like, I don't eat much of those – much meat or sweets and rice. But now I can change it – I can, uhh, cut it off because of my diabetes.”

“And then another thing is eating. Unlike before, I don't eat much anymore and I don't, uhh, eat much of, uhh – like, I don't eat much of those – much meat or sweets and rice.”

One participant spoke about getting the freedom to make changes in her eating once the barrier of poverty had been lessened when she immigrated to Hawai‘i:
“When I came here, that’s when I changed. Because when I was in the Philippines, I don’t have money. You cannot change – you just eat anything. You cannot buy anything.”

Another participant spoke of her process of incremental change which she kept working on. This participant put high value on education provided at the health center, and was able to apply that knowledge in behavior change:

“At the beginning – difficult because...but I start a little, little, I learned. Little bit by little bit. Not - I did not change abruptly. Yeah. Little bit – step by step, like that.”

Another participant remarked that she felt more energetic once she changed her diet and started taking medication:

“Unlike before, that, I have a lot of energy to go places.”

Prevention was a subcategory of change described by three participants. Behavior in the present was changed to impact future outcomes by preventing complications:

“...but the doctor said, I don’t want you to get you know – you know you cannot see or something you know happen to your eyes like that and then – you know your feet like...”

“...I wear, umm, my boots. I wear gloves you know I scared my feet... If something happen in there you know – I don't want.”

“I – that's it – I am thankful that I have learned that I have this disease earlier so it – I have the time to –to take care or to take medicine – to do the exercise – to cut off my – to change my eating habits.”

“...you know your feet like that so – I scared, so I take medicine. By the time I keep on taking medicines.”

“...he keep on calling me, like this – and oh, especially your heart, sister, like this or – so, you know ...so I just try to walk, you know...”

Maintenance was a second subcategory of change described by two of the participants, both of whom had suffered complications of diabetes. Both of them had made changes to achieve their current good levels of glycemic control. Maintenance was
a stage of change for them, in that they were not trying any new behaviors to increase their control:

“...I’m worried and then, umm. But I’ve been trying to maintain what I’m eating.”

“...I’m trying to do my best to -- to maintain the sugar in my blood.”

“So, I have to sacrifice... Yeah, so -- to maintain my sugar -- yeah. Especially drinking.”

“Uhh, how -- how I know I’m doing well? It’s not -- for me I’m doing well when -- because I can -- I can maintain my sugar, my weight, and my blood pressure.”

Pretending was a third subcategory of change. Only one participant stated that he knew of people who were pretending to change. This strategy was raised during the interview question concerning what about being Filipino made it difficult to take care of diabetes. The context of the pretending strategy was the medical visit and communication with the doctor. Telling the doctor what one was supposed to be doing, rather than what one was actually doing, may be done as a sign of respect to the doctor or as a way to avoid conflict. The investigator considered the possibility that the participant was talking about himself before he developed his renal failure and at that time improved his self-management:

“Yeah, uhh, because some are only, uhh -- oh, what do you call that -- pretending. They’ll -- they’ll telling the doctor that yeah, yeah, I’m doing this, I’m doing that... But they kept on doing worse because they’re not -- that they’re not doing the right one. Yeah, that’s one of the Filipino habit.”

“They want to take the doctor advice, don’t drink, don’t drink, like this, like this -- yeah, I’m not drinking -- but inside their home they’re drinking with nobody.”
In summary, nine of the eleven participants described change as a strategy, with its sub-categories of maintaining, preventing, and pretending. The frequency of these statements was related to the interview questions about changes related to having diabetes. Only one of the men spoke about people pretending to change. Pretending may represent deference to the authority of the physician or a way to avoid shame.

Prohibition

Prohibition was the next most commonly mentioned strategy, and was used by six participants. Four of those six participants had been diagnosed less than five years, and the other two participants were diagnosed 18 and 22 years ago. Prohibition was practiced with a list of specific, forbidden foods. Participants had usually been advised by others to stop eating these foods. Prohibition differed from avoidance in its specificity of named food item. Fatty foods were most commonly mentioned as a prohibited food:

Q: What changed?
A: My life - my style of eating, because before I used to only drink soda, I ate foods that are fatty or what.
Q: What - what fatty foods did you change? And how much rice do you eat?
A: Uhh, pork... Just only pork. I do not eat the ones with fat already. I usually eat the lean or - and just three pieces or...

A: We love to eat our own, you know, food. You know the - we cook the pig feet with the - with the soup - with the [inaudible] like that. But we eat with bagoong (sauce of seafood fermented with salting), you know.
Q: Yes. Very salty.
A: That's why. But we put vegetable that - that - not much vegetable. That's why I think that's Filipino - the way they cook.
Q: Uhh huh.
A: They love meat. Some Ilocano (northern region of Philippines), they like vegetable.
Q: Uhh huh.
A: You know, but me Tagalo (central region of Philippines). We love meat and we like fried kine (local pidgin for type or thing) with the oil that's why. So now I'm trying not to do that.
Q: What is not good?
A: Bad. It's bad for your health.
Q: What things, for example.
A: Eating pig, pork, chicken skin.

"Because before I eat -- I like the macadamia nuts – chocolate."

One participant mentioned switching to olive oil to fry her fish. One day at work, feeling like her fried fish would be too heavy to eat, she opted for the turkey and gravy offered at the cafeteria. These diet changes did not lower the amount of fat in her diet, but she felt she was making a positive change.

"...fried fish -- I love fried fish. But it's not -- but I use olive oil now."

A: You know, this morning, uhh, I brought one big fish fried of opelo – I like opelo – papio.
Q: Papio.
A: I fried and then I have rice. You know, one container – small container. Then I have tomato. I'm planning just chop, chop the tomato – put little bit salt – and I eat rice with that fish. But I said, oh this is heavy again – so I went to the kitchen – I eat the one scoop mashed potato.
Q: Uhh huh.
A: And turkey – you know the turkey with the gravy.

The other specifically prohibited foods were fruits. This participant was describing the dietary instruction given by her physician in the Philippines when she was diagnosed three years earlier:

A: The doctor said it was caused by eating too much food and prohibited foods. And he also told me that there are some fruits that I should not eat.
Q: Which ones?
A: Sweet fruits like mango, chico, and any fruit that is sweet.
Q: OK.
A: Banana I can eat. There are some types -- different types of banana that can eat only.
Although no specific foods were named by these two participants, they are referring to specific types of foods. One participant mentioned substituting vegetables for prohibited foods:

"As I have said, I – I cut my eating habits... Of the foods that are not good for me. I added more vegetables in my diet."

"Not to – not eating the food that getting the sugar to go up like that."

These prohibitions were portrayed as a sacrifice by only two participants, both of whom had their diabetes the longest of all the participants. One of the men who had been very successful at weight loss and controlling his diabetes had developed chronic renal failure which disabled him from his chosen profession.

"I not wen to the park anymore – sometimes –because I cannot drinking."

"I cannot eat too much – I cannot eat sweets... So mostly I – I stay at home."

Q: So you cut out one meal.
A: Only lunch and dinner.

The other participant attended the morning diabetes clinic for her first and only visit after working an evening shift. She did this to be able to get samples to refill her medication until her insurance from her job became effective. In this case she was prohibited from complete sleep to accomplish her self-management task of taking medication:

"But not too much, like that – so I get up – I try my best to get up. Come on, I said, I gotta get up, I gotta get up. So I get up – I attend to, uhh, you know this, uhh, diabetes program."
Education

Learning about diabetes and how to manage diabetes was valued by participants. Education was viewed as a positive experience with practical benefit. Most mentioned education at the end of the interview when they were asked if there was anything else they wanted to add. Participants enjoyed sharing what they learned with their friends and mentioned persuading others to join them:

“I like it here because I’m learning.”

“I tell them that I’m coming here [to CHC] and they are teaching us about diet.”

A: Yeah, so. We saw it on the TV — how they make it [noni juice].
Q: What show is that?
A: On the Filipino channel.

“Uhh, especially to you ma’am and [the Filipina nurse]...Who are helping me more and not only me — others too — to understand — to tell or — to educate us about diabetes.”

“And I can share [with] them [her co-workers] whatever I learn.”

Participants made connections between what they learned and applied that knowledge to improve their self-care:

“You know, Anne, and [the Filipina nurse], I’m happy that I’m here. I meet you here in Palama because you had me for my medicine and how to take care of my diabetics, like that.”

“Well, I can take care myself more better than he, that’s because I — I have a wider knowledge about it...”

“I was just glad that I was in your class because you taught me how to eat right and to know the foods that are not good to eat. So it helps. It’s a great help for me because I’m learning a lot on how to do things that I’m supposed to do and the things that I’m not supposed to do and to eat the things that I’m supposed to eat.”

“I don’t eat as much anymore and I don’t eat ice cream, cake anymore because I learned from you that it’s not good.”
Three participants who were diagnosed and initially treated by private physicians made comparisons in the area of education, and felt the CHC program did a better job of facilitating their self-management:

“...but he did not – but – but he did not – this may help to control my food – not like here…”

“That – you send me to the nutritionist who started the – how to – to eat the food, like that.”

“When I go to the private doctor – they did not tell you what they are doing...They tell you, you take this medicine...But they will not tell you that, you go exercise [inaudible]...And control your food.”

“Because here we learn too much about the diabetes. They just go to doctor and take the medicine – they take like that. Maybe they tell them about exercise, maybe…”

In summary, participants appreciated factual information about diabetes and how to take care of it. They were eager to learn about what they could do for themselves beyond taking pills. The notion of learning not just what to do but how to do it epitomized the benefit of self-management education over traditional medical care.

Acceptance

Three of 11 participants described a strategy of acceptance. One man had been diagnosed only one month earlier during a check up for work, and was a symptomatic with his diabetes:

“I just feel – as I said, I just feel I am not sick...I just put to myself, life goes on.”

Other participants who had diabetes for a few years described their strategy of acceptance of having a condition they could influence but from which they could not be free:
"It seems it is my—ordinary...life."
Q: OK. What is she [friend in the Philippines] doing, if anything, to help herself with her diabetes? Is she changing her diet like you do? Is she exercising like you do?
A: No. Because for food, they just eat anything. Because they don't have anything. Just rice.
Q: So they can't—just rice.
A: No money.
A: Nothing—he just said, what can we do when they found out you had that illness [diabetes].
Q: Umm hmm. Umm hmm. How did you answer him when he said, what can we do?
A: Nothing.
Q: Uhh huh. OK.
A: I cried.

When asked if there was anything about being Filipino that made it easy to take care of their diabetes, two participants referred to the idea of acceptance:

"Because I'm a Filipino, so that's what I have for my life. So I just accept being a Filipino."

A: If it will make you worse. Yeah. You will forget that you have a hard time...To control, yeah.
Q: I see. Do you think that's a Filipino philosophy? Is that how Filipinos think?
A: [laughing]. Yes, isn't it we're like that—we have to think about what's good for us.

Three participants described acceptance as relaxing, freedom from worry, and knowing they were doing all they could do to take care of themselves. Once free from worry, they felt better:

"I feel relaxed. I'm not that weak."

Q: Is there anything else that you had to change in your life?
A: Relax. I'm not thinking about what I have diabetes or not. Because I am worried that's not good for my diabetes.

"I'm not thinking about, 'oh, I've got diabetes'—like this. Because I take my medicine—OK. And I'm not eating too sweet. Even I go back there, will not eat too much sweet."

"They [Filipinos] will take the medicine and they will not eat the plenty sweet. Then they do not think they have diabetes. Just take medicine, relax, and eat what's good for them."
One participant, after a stressful event at work, took intentional steps to relax by taking a break, watching fish in an aquarium, and drinking cold water:

"So I sit down by the bench you know our – going to our work have bench. I said [inaudible - name?] I sit down over here for a while. Oh, OK. But [inaudible] I sit down by the fish - you know by the chair... I can sit down over here yeah, I said to them – oh, yeah she said that to patients and – so until I become you know... Felt better – I just sit down and then [inaudible] and then I drink cold water."

In summary, acceptance was a strategy adopted by those who recognized that worrying was bad for their health. Acceptance included accepting the therapeutic regimen, and accepting life with diabetes as an "an ordinary life." Participants who used this strategy had less emotional distress about having diabetes than participants who were avoiding or maintaining. They were also more likely to use a combination of self-management strategies.

**Trying**

"Trying" was a descriptor which five participants used in all areas of self-management behavior. Trying as a strategy perhaps reflected modesty on the participants’ part, but also reflected the nature of self-management itself in which self-managers strive for certain behavior but may not achieve perfection. This strategy was mentioned most often by the most recently diagnosed participant, and was also used almost exclusively by the participants who spoke English during the interviews. Trying was used most frequently for diet:

"So I try to drink lots of water – some – I lazy to drink water that’s why."

"Try to – I tried to limit my number of drinks now."
“...sometimes I try to – not to eat a lot. I try to abstain from sweet foods.”

“And also I'm trying to limit what I eat.”

“And I tell them [her co-workers] that I'm trying to avoid eating foods that are not good, and also I'm trying to do exercise.”

“Now I don’t eat too much with the shoyu (soy sauce), like that...I'm trying. Because I scared to die early.”

Exercise was also an area in which participants were trying. Two of them were succeeding and maintaining exercise programs, but still hesitated to claim these accomplishments:

“I – I try to walk in the morning.”

“And – but I'm trying to exercise.”

“And sometimes, uhh, when I have time I do a little exercise – although I used to exercise before, but...I try to go back to doing exercise again.”

Other areas where participants used trying to describe their behavior included maintaining a job, limiting social engagements, taking medicine, monitoring blood glucose, and relaxing:

“If I think a lot or worry a lot, it affect my illness. So now I'm trying to get rid of thinking a lot.”

“...they said, oh – I told – I have two friends that are also diagnosed with diabetes. So they said – they told me that you can control yourself, so I try to.”

“I – I can still go. But I – I try to abstain sometimes.”

“But, uh, then because with the words of my friends that I can take care by myself [by using a glucometer to monitor blood glucose] then I will try to.”

“I'm trying to do my best to – to maintain the sugar in my blood.”

“Uh, I try to take, uh, prescription medicine.”

“So the only thing is I try my best to work, you know.”
"But now I'm trying to control it."

"That's why I'm trying to do my best to – to be you know well – to you know to be healthy."

In summary, trying in the context of self-management did not mean trying and failing. On the contrary trying meant actively engaging in behavior change, even though that change had not been firmly established. Trying also meant that a goal for a particular behavior had been set. The choice of the word trying may have been influenced by the pidgin language commonly spoken by local people in Hawai‘i. For example, in pidgin "try go" or "try do" means "go" or "do." Because trying was more often used as a present participle by these participants for whom pidgin was not a first language, the context and meaning of trying were not entirely clear.

**Avoidance**

As with moderation, avoidance was a strategy applied to food and social situations. This strategy was more like "stay away" than "just say no." Six participants mentioned using avoidance. This strategy was applied to food generally, as contrasted with prohibition of specific foods described in a later section:

"...I am avoiding the foods that – that are not good for me."

"Well, I can take care myself more better than he [her father], that's because I – I have a wider knowledge about it...Or I can understand more – the importance of, uh, having – uh, or cutting off the foods that – or avoiding the foods that are not good."

"Uh, oh I have to avoid to eat something – those are sweets."  

"...avoiding the foods that are not good. And, eating that – drinking soda or any kind...I try to abstain from sweet foods."
“...I'm trying to avoid eating foods that are not good...”

Three participants mentioned parties as something to be avoided because of food choices which would be difficult to resist. When avoidance failed as a strategy, one participant chose prohibition, another decided to eat, and the third practiced moderation:

“But I'm trying to - to avoid. I wanted to be healthy. You craving the food - you - and plus, uh, uh, sometimes you don't know what gonna happen - I think that's the problem when they have a party. That's why you better... take not, you know, their food.”

“Because you cannot avoid those - those, uh - what they have in the party I have to eat. Sometimes we cannot - we cannot avoid to - to go in the party, but I don't eat too much.”

Two participants mentioned avoiding everything which could cause diabetes to become worse. A third was avoiding thinking about diabetes because it would cause worry. The more extreme strategy of total avoidance was used by the participant who had diabetes for the most number of years and had the most advanced renal insufficiency and difficulties with blood pressure control:

“They start me, uh, what do you call that - doing everything to - to avoid the sugar in my blood. What can make my diabetes worse - so I avoid everything.”

“Uh, I think the - the most difficult thing to me is, uh, I have to avoid everything that, uh, can contribute to my diabetes to become worse.”

“I go out - and so I - I can avoid to think and...”

In summary, avoidance was used as a strategy by six participants who represented a cross-section of all the participants. Two of those participants had poor glycemic control. Two had the highest number of years with diabetes and reported avoiding foods and parties as the most difficult thing about having diabetes. Avoidance was a strategy used in combination with moderation. Avoidance meant staying away from difficult situations, while moderation meant facing situations with resolve.
Diet

The second largest category within self-management was diet, with 78 significant statements. There were 10 subcategories within diet listed here with the number of significant statements following in parentheses: sweets (29), rice (15), vegetables (10), water (7), meat (6), salt (6), and American food (5). Each subcategory will be described in descending order of the number of significant statements.

Sweets.

Nine of 11 participants mentioned sweets as an area requiring management. Four participants stated a strong desire for sweets, with one woman describing eating a candy when her evening meal was delayed because of her interview with the investigator:

“She said, how come you lose weight and – we have to – before we eat too much – and especially chocolate. So we exchange gift – you giving me chocolate – my goodness, oh.”

“But before I come over here I eat one chocolate. You know just like hard chocolate, like that – so I eat at least – you know I don’t wanna low my sugar yeah.”

“I’m fond of sweet - the candies, like that – uhh, the coke. And it happened that – that was the time I eat so much.”

“You have a lot of – you have a sweet tooth.”

“And my sugar – I pour so much sugar in my coffee.”

Most participants stated that giving up or limiting their intake of sweets was an initial and continuing strategy for glycemic control:

“They’re eating a lot of sugar. Uhh, but dad is always remind [me].”

“I cannot eat too much –I cannot eat sweets...and then I eat some, umm, sweet – uhh, it become worse, my – my sugar-blood.”
"I guess, uhh, with the food that I eat – because that's what people say. That we can get diabetes maybe eating too much sugar or any other food that has lot of, uhh, sugar."

"I don't eat as much anymore and I don't eat ice cream, cake anymore because I learned from you that it's not good."

"It's not difficult for me now because for my taking the medicine and not eating too much sweets. That's all."

Two participants reported continuing to eat sweets, but with a strategy of moderation:

"She – she don't – he don't like me to eat the sweet. She always watching my diet. Sometimes I eat ice cream [laughing]."

Q: What other things did you change?
A: Eating too sweet.
Q: What do you mean by that – you're eating not sweet? What did you stop eating or what are you eating now instead?
A: Kind of – I will not stop eating the sweets, but a little bit, a little bit sometimes – not often.

Two different participants reported changing to sugar substitutes to continue to have sweet tasting food items while avoiding the problems associated with eating simple sugars:

"And I use, you know, they said Equal sugar, diet Pepsi – sometimes I drink diet Pepsi because sometimes I feel like, you know…"

"So I'm afraid of the sugar. I'm not using the sugar, only the Equal."

Soda, alcohol and fruit are considered subcategories of sweets because they are metabolized as simple sugars. Soda was considered to be widely available and consumed in both Hawai‘i and the Philippines:

"...in the Philippines I already have diabetic, because we always drink soda, yeah...Coke – especially coke, because that's the water of the Filipino."

Q: So you – one thing you said, I think, was that you – drinking a lot of soda, you think, causes diabetes.
A: I don't know because this is—because when I come it in Hawai‘i, that's the time that I hear if you always drank soda you get sick.

“...maybe when I was at Continental, because every time we drink soda.”

Participants managed soda by different strategies, including prohibition and moderation:

“...avoiding the foods that are not good. And, eating that—drinking soda or any kind.”

“Because, uhh, my daughter always advise me that it's no good the soda. I'm trying my best not to drink soda anymore. That's it—I think, umm, I also cut down on the drinking soda.”

“...you have high sugar—you avoid eating sweets. Don't put plenty sugar in whatever you drink.' Then I do not drink soda, stopped drinking soda.

Two participants had substituted diet soda for regular soda when they drank soda:

“And I use, you know, they said Equal sugar, diet Pepsi—sometimes I drink diet Pepsi because sometimes I feel like, you know, so—I drink, uhh—but I don't drink all...”

“But, uh, once in a while, yeah, and diet. I drink diet.”

The two male participants described limiting alcohol:

“They want to take the doctor advice, don't drink, don't drink, like this, like this—yeah, I'm not drinking—but inside their home they're drinking with nobody.”

“Try to—I tried to limit my number of drinks now...I used to drink more than two bottles of beer before...Now I limit myself, uh, by two. If not, I will drink maybe about a glass of wine or maybe a shot of whiskey...Before I—I am a hard drinker—I can drink a lot before.”

Fruit was mentioned by two participants who had good glycemic control. One woman was managing fruit by prohibiting certain kinds of fruit. The other woman managed by moderation, and used banana to insert her large pills to help her swallow the pill.

“And he also told me that there are some fruits that I should not eat...Sweet fruits like mango, chico, and any fruit that is sweet...Banana I can eat. There are some types—different types of banana that I can eat only.”
“I know if I get hyperglycemia maybe I eat plenty – or even salty you know. I like the green mango.”

“And I brought half of the banana – I eat with my – my – my medicine.”

In summary, the category of sweets was most mentioned by participants as a food which required good self-management. Simple sugars were common in their pre-diabetes diets. Even participants who had minimal education about diabetes were told to restrict sweets, soda and alcohol. Some participants believed that eating a lot of sweets contributed to their onset of diabetes.

Rice.

Rice was the second most frequently mentioned food item in the context of diabetes self-management. As with sweets, nine of 11 participants mentioned rice. As with sweets, the restriction of rice in the diet was frequently recommended to participants, and most had adopted eating less rice in their self-management. No one reported prohibiting rice entirely. Some had cut back rice at one meal, while others continued to eat it frequently but in smaller portions.

“He [her doctor] gave me some instruction, like eating foods that are not good. Like eating too much rice…”

“. . . I don’t eat much of those – much meat or sweets and rice.”

“I change – I only eat little bit rice and simple meal, you know. Uh, not much – not like before.
I guess only – eat little rice, like that.”

“And you – and you cut down your rice – you cut down everything.”

“. . . so I just try to walk, you know – just don’t eat too much rice like that.”
Many participants remembered clearly how much more rice they used to eat before the developed diabetes:

"Not too much rice, banana, apple, orange, jabon (fruit similar to grapefruit)... When I didn't have diabetes, I can eat anything I want. And now I have to control what I eat."

"Not -- yeah -- like not before I cannot eat rice."

"Even you like to eat some more rice... oh -- you cannot eat like before, rice three times a day, but now I cut down...."

Although not mentioned as often as sweets, the desire to eat more rice came through more strongly than for sweets for one participant:

"...I don't eat too much rice -- but sometimes you're craving you know."

"And sometimes I love to eat plenty. Look like I'm not satisfied. Especially rice."

In summary, the significance of rice in the Filipino diet was greater that the significance of sweets. Rice was managed by moderation, and cutting back on rice was difficult for several participants. The importance of rice will be presented as a cultural theme at the end of this chapter.

Vegetables.

Four participants mentioned recommendations made to them to eat more vegetables to improve their health. Eating more vegetables went along with eating less rice, implying that one would fill up on vegetables:

"...for your cholesterol...wheats and vegetable -- you know the salad like that."

"...and I should eat more vegetables and I should eat more fruits."

"It’s good for me. I added more vegetables in my diet. I eat more vegetables and not much rice."
Q: What is not good?
A: Bad. It's bad for your health.
Q: What things, for example.

One woman spoke a lot about vegetables and was nostalgic about life in the Philippines where she worked on the family farm. She spent nine months on her nephew’s farm on Oahu during an episode of clinical depression, and reported the physical activity helped her to lose weight. As a Tagalog, she distinguished the cuisine of the Ilocano as favoring vegetables:

“Even only you know Filipino – only you know the eggplant– you boil it with your fish and with little patisse, you know the fish sauce. And just like you know the lemon. I love it. I eat plenty already. I’m satisfied.”

“Because over there in the Philippines – because I’m a country lady – I go to our rice field, to our vegetable garden – I help my brother and my father. I sell my – our – our vegetable in the Philippines, like that.”

“…my nephew has the piggery in Kahalu'u and we clean the place to plant vegetable…so what I did – we plant vegetable. Eggplant, bitter melon.”

“Some Ilocano, they like vegetable.”

“She [her co-worker] said, how you manage now your body? I walk – I said that I walk thirty minutes and then I don’t eat too much now – I eat only vegetables.”

In summary, vegetables were viewed as a healthy food, with eggplant and bittermelon specifically mentioned as common in Filipino cuisine. Several participants reported eating more vegetables to fill up, now that they were eating less rice and less meat.
Water.

Three participants mentioned drinking more water. For two of them, water was a substitute for giving up soda:

“And I drink water...”

“I - like for instance, the eating habits. The exercise. Umm, I usually drink more water now.”

A third participant was trying to drink more water, and reported drinking a lot of water after consuming excessive salt with green mango:

“So I try to drink lots of water - some - I lazy to drink water that's why.”

“I eat with the papaya. Whoa, I can feel like my - my eyes little get blurred. I said, oh my god, I said, I drink plenty water.”

“...or even salty you know. I like the green mango...And I drink water...”

This same participant also described her Filipina co-worker as someone who was eating more like an American and was drinking more water as well. She herself described drinking water after an upsetting experience at work, as if the water were either calming or cleansing her:

“Plus she [Filipina co-worker] only eat the small amount - small portion. So that's it. And she drank - drink lots of water - tea.”

“I sit down by the fish - you know by the chair. I can sit down over here yeah, I said to them - oh, yeah she said that to patients and - so until I become you know. Felt better - I just sit down and then [inaudible] and then I drink cold water.”

In summary, water was described as something good for managing diabetes because it was healthier than soda and helped to clear the body of excess salt, sugar and stress.
Meat.

Five participants mentioned meat, with four using moderation as a strategy and one prohibiting meat and substituting fish. Meat was usually pork. Tagalogs were more accustomed to meat, while Ilocanos were more accustomed to fish. Fish was considered a good substitute for meat, and lean meat was better than fatty meat:

"Just only pork. I do not eat the ones with fat already. I usually eat the lean or – and just three pieces or..."

"...like, I don't eat much of those – much meat or sweets and rice. I eat more vegetables and not much meat."

"Bad. It's bad for your health...Eating pig, pork, chicken skin. Just eat fish, vegetables."

"Get all the you know the huli huli pig, any kine –sometimes I notice – but I'm Tagalog."

Salt.

Seven of the 11 participants had the comorbidity of hypertension. Only two of those participants mentioned dietary salt as something they were aware of or managing:

"Yeah, but now I don't eat too much with the shoyu (soy sauce), like that."

"I know if I get hyperglycemia maybe I eat plenty – or even salty you know. I like the green mango [with salt]."

"Eating [food dish? – inaudible] and salty foods and something like that, but I guess it's not easy to, umm, not to take it if you want to."

Salt was described by one participant as pervasive in Filipino cuisine, and difficult to avoid if one were eating Filipino food:

"But like they cook salty food. I think that's the problem when they have a party. That's why you better... Take not, you know, their food."
A: We love to eat our own, you know, food. You know the – we cook the pig feet with the – with the soup – with the [inaudible – raimu?] like that. But we eat with bagoong (seafood sauce fermented with salt), you know.

Q: Yes. Very salty.
A: That's why. But we put vegetable that – that – not much vegetable. That's why I think that's Filipino – the way they cook.

"Filipino put so much [inaudible] yeah, the food we eat... The way the Filipino they prepare food. Salty – too much."

In summary, salt received little mention even though seven participants had hypertension. The difficulty of finding satisfactory low salt alternatives in this cuisine may explain why only one participant attempted to moderate her salt intake. Providers may not have recommended salt reduction if the blood pressure were controlled.

American Food.

One participant made many comparisons between American and Filipino food. She did not like several foods she labeled as American foods. She rejected wheat bread, skim milk, salad, pasta, and frozen entrees even though she recognized that these might be healthier food choices than her rice, cream in her coffee, and fried fish. Even without these food options, she had reasonable glycemic control.

"...they said I have to eat wheat – but I hate the wheat bread...wheats and vegetable – you know the salad like that."

"...I put – but I cannot drink with the skim milk that's why. I don't want skim milk that's why."

"...fri... fried fish – I love fried fish. But, you know, my son, you know, he use olive oil with pasta. But I hate pasta – you know my son, he cook pasta with tomato –tomato – it is peanuts. But with the cheese. And with the garlic. You know the garlic he chop chop...Oh, yeah – no, he's becoming American."

"You know the way you prepare your food – you know – so it seems that you hardly adjusted with the American food, you know, like sandwiches, salad, you know, the rice,
the mashed potato, you know, uhh, bread. You know American put bread, yeah — spaghetti like that — we hardly eat that, that's why. We love to eat our own, you know, food.”

“Sometimes she [Filipina co-worker] has the healthy food [Healthy Choices brand of frozen food] you know to put in the microwave... But I said, how come [you are eating Healthy Choices frozen food] — you are American now?”

In summary, American cuisine was viewed by one participant as healthier than Filipino cuisine because of lower salt, lower fat, and lower glycemic index for starches compared to white rice. There were several possible reasons for her views. This participant may have had more nutrition knowledge because of her job as a nurse’s aide at a hospital, education as a nurse in the Philippines, and the fact that her brother was a physician. Her son was born and raised in the U.S. She had lived in Hawai’i for over 20 years, thus having more exposure to American food. Other participants did blame the Filipino diet for contributing to their diabetes, but did not talk about alternatives labeled as American food.
**Roles**

Various roles in one’s life was the next most mentioned category within the self-management behaviors domain. Roles were included in the self-management category if the description of the role meant a possible conflict with or benefit to the participant’s self-care. Examples were roles which put demands on time or roles which caused or relieved stress. There were four roles identified with the number of significant statement following in parentheses: worker role (14), family roles (13 with subcategories of adult child [5], childcare [3], and parental [5]); social roles (11 with a subcategory of men’s social [2]), and patient role (6). These roles will be presented in descending order of the number of significant statements for that category.

**Worker Role.**

All but two of the 11 participants were employed outside of the home. One of those unemployed participants was 76 years old and somewhat disabled because of a stroke; the other participant had recovered from TB and did not work because her husband did. For the others, employment was clearly an expectation they had for themselves even if they worked in the home caring for grandchildren:

“My husband, uh – my husband helped me for that and I have – I have work too.”

“I had been a teacher for the past twenty years in the public school [in the Philippines].”

“I was even working that day...I work eight hours that day [when admitted to hospital for pneumonia].”

“In the Kahalu'u when I was – imagine one year and nine months I stay home [i.e./ no job].
So over the time you know – I – I wanna you know – because I wanna work – because I'm thinking about my retirement.”
Work was viewed as something enjoyable by three participants. Two found intrinsic value in the kind of jobs they had chosen. For another, getting support from other co-workers who had diabetes was valued:

A: I have also worked with the Philippine government before for a number of year.
Q: What did you do for them?
A: I was the advisor for the mayor.
Q: Uhh huh.
A: I do all the paperwork for the mayor. And to some extent I would be the advisor of the mayor...I do all the meetings of the municipal council meeting. Uhh, I outgoing or ingoing letters for the mayor, I would be responsible for it.
Q: Umm hmm.
A: And give him any advice that I can help...the title is a municipal secretary.
Q: Municipal secretary—OK.
A: I now drive as a taxi driver.
Q: Umm hmm. Have you done that ever since you came to Hawai‘i?
A: I–no–I’ve done lot of work–I’ve tried to do all kind work that I can do.
Q: Umm hmm. Like what?
A: I have been a real estate salesman – I did travel agent –insurance agent.
Q: Uhh huh.
A: I was in the hotel.
Q: Uhh huh.
A: I was also able to [inaudible] a job with the state as a correction officer.
Q: Oh.
A: But I didn’t like the job.
Q: Yeah.
A: So I resigned.
Q: I see. Wow – so you’ve tried out a lot of things. What did you like the most? What’s been your favorite job?
A: Actually, I enjoy taxi driving...Yeah although I don’t have any benefits, but – I really enjoy driving taxi. I enjoy meeting different people every day.
Q: Uhh huh.
A: Although they are–might be some rude people, but yet I know joke with them.
Q: Uhh huh. OK. And how many years have you been driving a taxi?
A: Uhh, let’s see – going over thirteen years now.
Q: Oh, OK. Do you have your own taxi? Or you work for a company?
A: Uhh, I have my own taxi.
Q: Would those [other Filipinos] be friends of yours or how do you know people – at this clinic or other places too?
A: Yeah. Even in my work.
Q: In your work.
A: They say, "even me – I've got high sugar" like that.

Four participants reported doing manual labor jobs when they first came to Hawai‘i although this had not been the type of employment they had in the Philippines. Three participants had to take lower paying part-time janitorial jobs when they gave up their full-time jobs because of childcare responsibilities or disability. When asked to describe their exercise, participants spoke about their jobs with high demands for physical activity. Whether in Hawai‘i or in the Philippines, these jobs were viewed as helpful for diabetes because one was able to efficiently get exercise on the job:

“But when I – I – when I worked in… Hawai‘i, I work in Dole company. And my first job is picking pineapple.”

A: … at work I – I, uhh, walk too much in three – in three hours – because I work three hours a day.
Q: … And you're walking a lot when you work?
A: Yes, because I mop, I sweep.

“She [sister-in-law] exercise in – in her working place that's out in Pearl City – she work everyday. How many hours – I think twelve.”

“I sell my – our – our vegetable in the Philippines, like that.”

For one participant, the relationship with her boss was very positive. After her husband died, the boss allowed her to use all of her banked vacation when she was visiting in the Philippines and seemed open to considering extending to a leave of absence. Beyond viewing this offer as a reward for being a good worker, the participant felt wanted and supported in that job environment:

“But when the time my husband died, we stay almost two months. So I called my boss. I said, you know, I cannot come back already, because James not – I cannot manage myself. Two months I out of job, but I have to – they pay me because I get so much vacation. And because I love to work…”
"My boss said – my boss said – no come – and then, uhh, we will help you as long as I can help you. You know, we love you so much, so come. And so – so I come home again."

In summary, the participants described their roles as worker as an expectation, an opportunity to do something enjoyable with others (either customers or co-workers), and something requiring physical demands in many cases. Smooth working relationships and a responsibility to the employer were part of their roles as workers.

**Family Roles.**

Within the domain of family, the category of family roles included participants’ roles as adult children, as parents, and as childcare providers to their grandchildren.

**Childcare Role**

Two participants took on the role of caring for grandchildren to enable their adult children to work. Both experienced time constraints from this role. For one participant, her grandchildren were young school age and required her presence at home to get ready for school and to watch them after school until the parents returned from work by 6 p.m. This schedule limited her to weekend jobs only outside of the home. This participant resigned from a full-time job with insurance to fulfill her childcare role.

A: And I wake up the kids six-thirty. I give them breakfast and they fix themselves and then the sister-in-law of my daughter will pick them up to school... they will just drop them off again in two-thirty.

Q: Oh, but you need to be home...
A: Yeah.
Q: ...when they get home. I see.

Q: Yeah. OK. Are you doing any work right now?
A: Uh, I go to — there's a part-time work on Saturday/Sunday... At the Ka'ukaleke Market. I work there as a — I pack vegetables and help the owner.

Q: Have you worked before?
A: I have been working at the Continental Honolulu kitchen, ma'am.
Q: Umm... hmm.
A: We pack foods for the passengers for the past three years.
Q: Mmm.
A: Since '96 to '99.
Q: I see. OK. And did...
A: But I quit the job because of the kids.
Q: OK. To take care of the kids [her grandchildren].

The other grandmother among the participants was caring for pre-school aged grandchildren until about 3 p.m. She was able to work three nights a week at a convenience store on top of her childcare role which often left her feeling tired by the end of the day. This schedule prevented her from going to medical visits except on her daughter's days off.

A: Me? No leave the house.
Q: In the house — OK.
A: Yeah. Because I cannot go out because I am — because I got how many kids in the house? I watch the kids...
Q: Who takes care of the kids when you come here?
A: My daughter's day off is today. Yesterday and today is daughter's day off.

Parental Roles

The parental role described by participants emphasized raising your children the right way, and also looking out for and staying close with your children. Parents wanted to be seen as authority figures who made a range of important decisions for their children, including which children stayed in the Philippines and which could go to the U.S.:

"...dad already old. And you know also — and you know the old people, they're says oh I know more than you — if you advise them, I know more than you. [laughing]. I'm older than you... And maybe that is the difference between me and him... Because I have a greater or more understanding."
"I brought my mom, but—she doesn't like over here. She went back. That's why I never petitioned my—my brother and sister. I have one sister. We are really close family tie—my mom—so we [inaudible] my father. That's why sometimes if your family raise you—they are so nice—I cannot alright what they [her employer] doing to me, but you know. Uhh, so."

"Because my mom and my dad is so religious. So I—they raised me—you know, raised me like that, you know, since I was a baby—we go church, Sunday school, and—so, yeah."

Another parental role was to continue to look out for your children and continue to advise them when they became adults. One participant described her mother's brutally honest comment to her weight gain since she had married and moved to Hawai'i. The participant's reaction was accepting of her mother's comment as caring, stating that the family was very close. Another participant was a widow who had to leave her only child, a son, behind in the Philippines. She was concerned that he would become obese as she was.

"But that's why—when my mom so surprised, how come—you look like just like a pig. You know the pig."

Q: And how about your son—how old is he?
A: Twenty-four.
Q: Twenty-four. OK. So he's still kind of young to develop diabetes. Do you think he has learned from you how to avoid eating too much—and exercising?
A: Oh, no. He likes to eat too. Only now, he's living by himself, so it's more.
Q: In the Philippines or here?
A: In the Philippines.

In summary, a parent was expected to continue to advise and look out for their children into their adulthood. For these participants, their own children were adults and their parents were often in the Philippines or deceased. Several had been reunited with some of their children in Hawai'i while their other children remained in the Philippines. Having children far away created stress for several of the mothers.
Role as an Adult Child

Just as parents were supposed to look out for their adult children, so were adult children supposed to care for parents. Adult children interceded when the judgement of the parent was not right in situations requiring medical attention. One participant's husband brought her to the *abularyo* (folk doctor) for treatment when she was ill in the Philippines. Her daughter had to persuade her husband to bring her to Manila for treatment by a physician. In another case, the daughter was the first to know of her mother's diabetes because the daughter had gestational diabetes and could be the most supportive. For a participant who was clinically depressed and needed to leave a difficult job situation, it was her son who convinced her to do so to protect her health.

“‘And almost one month – I'm not really [inaudible], yeah – and then my married daughter told, mommy, and my daughter told to my husband that, daddy, we give you already time that your relative told us that mommy will go to the quack doctor now. He's not all – she's not all right --who will bring them...’”

“‘...but when I go to the hospital and I'm ready to -- OK – that's the time that they told me like that –like that you're doing like this mommy and like that.”

Q: OK. When you found out you had diabetes, who did you tell?  
A: My daughter. I told my daughter.

“So I wanted to fight, but my son said no –enough already. Just – say that to me – just work. [inaudible] he said – I will bring you money. But I don't know.”

Adult children were expected to advise their parents about diabetes self-care, implying that the adult children would need to get information about their parent’s condition. The same son, while attending college on the mainland, frequently called his mother to offer advice and encouragement concerning her diabetes self-care. Another daughter was managing her elderly mother's diabetes by keeping tempting foods away
This protection and advice was viewed as helpful rather than policing, and was also an expected role of adult child.

A: Thanks God I have a good daughter.
Q: Uhh huh.
A: She's watching, always, a - what diet.
Q: Uhh huh. So it sounds like she's helping you. Is that right?
A: Yeah.

Q: Yeah. Does your son know now about your diabetes?
A: He knows. That's why he keep on calling, "How are you mom? I want you to be healthy mom. Mom, you're still fat you have to walk. I want you to be healthy mom, you know. I want you to buy a house. You know, I want you to be happy."

Patient Role.

Four participants described their role as patients at the health center. The patient role described by these participants was about making and maintaining relationships. Patients fulfilled their role by seeking out what they needed, and working collaboratively with their provider to develop a plan of action they could accomplish. The needs mentioned were for education, receiving care from a provider who could speak Ilocano, and low cost medication:

"You know, Anne, and [Filipina nurse], I'm happy that I'm here. I meet you here in [CHC] because you help me for my medicine and how to take care of my diabetics, like that."

"Yeah, and then I heard in the radio about [Filipina nurse at CHC]. [inaudible] diabetes. So I -- I told Mercy to call [her] up. 'Cause I heard it from the radio."

"Even our class is finished, sometimes I come here to see the doctor. And if I have no more medicine, I can ask you."

Two participants expressed gratitude for the care they had received at the health center, as well as for the relationships they had made with staff. Forming relationships with staff gave these participants a feeling of confidence that they could take care of their
diabetes. Ironically, at the time of their interviews both women were struggling to lower their hemoglobin A1c levels which were the two highest in the group of participants. Even though they were not happy with their numbers, they expected they would be able to improve because they had done so before.

"But sometimes—I been—I've only—if I think here—my—I have this inner strength inside if I think about coming here. So I'm thankful that I was able to come here and I came to know you."

"I only like to—oh, I—I, umm, heartily thankful to the staff of this institution."

**Social Role.**

Social events were a challenge for four of the participants. Fulfilling their social role required seeing other people, mostly by attending parties and other social gatherings. All reported curtailing their social roles except for one participant who decided to continue to visit with friends at their homes or other places where food would not be an issue.

"...then I might be drinking more rather than what I drink. So, which might have an affect with my health, so that's the reason I try to—not to go out."

"I visit my friends and I just talk—go around."

A: So mostly I—I stay at home.
Q: Yeah. So it changed your social life...
A: Yeah.
Q: ...Is what you're saying.
A: Yeah, it changed my social life.

A: Yeah, I—I—I don't—I don't, uhh, join to any—like the parties.
Q: Umm hmm.
A: Because you cannot avoid those—those, uhh—what they have in the party I have to eat.
Q: So if you go you have to eat.
A: Yeah, I have to eat. So it will become worse then my diabetes I eat that.
A: I again I might be tempted to eat what other people eat and then I might be drinking more rather than what I drink.
Q: Uhh huh.
A: So, which might have an affect with my health, so that's the reason I try to - not to go out. I - I can still go. But I - I try to abstain sometimes.

Q: What would you drink instead? Have you been out - have you been out to karaoke?
A: Uhh - yeah.
Q: Been out with your friends?
A: Oh, yes.
Q: What did you do then? Did you make the change?
A: Try to - I tried to limit my number of drinks now.

"I'm not - before I like to go you know party like that with my friend. Now I don't want. Just like you want to stay home there and - just like you're depressed. Yeah, like that."

Both male participants described social roles which required going out with a group of male friends and drinking alcohol. Venues for drinking included karaoke bars, the park, and at the end of golf tournaments. Although golf was considered expensive, one participant played frequently with co-workers and his participation in their tournaments was expected:

"And after the [golf] game then we - we will go to bars."

A: Especially - I don't drink anymore - but before [inaudible], I go that, uhh, those drinking session.
Q: Drinking what?
A: Drinking - drinking, uhh, like the liquor - the beer...men gather together as [inaudible] - they call it drinking session.
Q: Oh, drinking session.
A: Yeah.
Q: Oh, OK.
A: It's like [inaudible]. Uhh, I go out with my friends - we go down karaoke.
Q: Uhh huh.
A: Uhh, we go down single bars or bars - what have you.

"Ohh, yeah - it's [golf] kind of expensive, but - wherever my friends go when I feel like going then I go - all over - all over the place."

Q: Oh, I see. Are your friends pretty much other taxi drivers
In summary, most participants were able to maintain their family roles, patient roles and worker roles in spite of having diabetes. Being away from their family in the Philippines made family roles more difficult to maintain. The availability of low-cost medications and services at the health center made it easier for these participants to engage in medical care. Social roles were not fulfilled for three of the participants. Two of those participants were men who avoided situations where drinking was expected. The third participant was likely experiencing a recurrence of clinical depression.

**Medication**

The category of medication within the self-management behaviors domain had 35 significant statements. There was one subcategory of complementary and alternative medicine with two participants contributing seven significant statements. The most commonly mentioned aspect of managing medications was remembering and forgetting. “And don’t forget to take the medicine. Yeah. I do that.”

“I take my medicine everyday...”

A: And I drink my medicine regularly.
Q: Umm hmm. OK. Good.
A: Because before I do not take any medicine.

Q: OK. Good. How, umm, how do you know when you’re not doing well with your diabetes?
A: Oh, when I – when I forgot sometimes to take the – the medicine – and then I eat some, umm, sweet – uh, it become worse, my – my sugar-blood.

“Uh, suppose – as long as we have our medication I have – I have to take it, ahh, in – in proper time every – everyday – yeah.”

A: Before when I said, uh, that I took my medication – I never saw my tablets, like that.

Q: Umm hmm.

A: Like now I’m now running out of [inaudible].

“Uh, I try to take, uh, prescription medicine.”

“But I just took this morning my blood pressure pill after lunch – then before lunch I would take my diabetes pill.”

A: Oh, sometimes I think I, since I’ve been taking I forget about two, three times not to take on time for I used to take.

Q: Umm hmm. How do you remember? What helps you to remember?

A: Oh, with my own memory – I just said maybe, oh when I’m on my way right – I’m taking something – oh, I forget to take my medicine today.

Participants described their reasons for taking medication. For several participants, taking medicine was following doctor’s orders. Some of these participants who were initially treated by doctors outside of the CHC were upset about not receiving more education about self-care:

“Oh, my doctor – the doctor told me that – take this medicine, but he did not – but – but he did not – this may help to control my food – not like here.”

“They tell you, you take this medicine.”

“Yes, ma’am. Uh, my nephew – I have learned that he is taking also medicine – he also go to the doctor.”

There were other reasons for continuing to take medication besides following doctors orders. Several participants were aware of the hypoglycemic effect of their medication. Medication was noted to compensate for eating sweets or overeating.

A: I have to take – I have to take the medication.

Q: Umm hmm.
A: Yeah, to maintain my blood-sugar.

"They [her brother and his wife] don't have any control. They just eat anything and they just say they'll take medication."

A: My other brother and his wife - they inject insulin every day. The other one just takes oral medication.
Q: OK. And besides their medication do they do anything else for themselves to take care of diabetes?
A: They have other medication, they have insurance, they are working. That's why.

"They give me a kind of medicine. Upon taking my medicine, my diabetes get better."

"I am also thinking about it, so I better do the - I better drink my medicine, to do exercise, and all the things that you said..."

"...and then I eat some, umm, sweet - uh, it become worse, my - my sugar-blood."

For some participants, taking medication was a relief of worry. One participant who was new to the health center had not as yet done a HgbA1c test or been evaluated to see if she needed medication. She was very eager to take medication if required.

Another participant was encouraged by her physician brother to try diet and exercise before starting pills. She chose to take medication because of her fear of developing complications:

Q: So you think you may not feel good at some time in the future?
A: Of course, because I'm not taking any medication.
Q: OK. And do you think you need some medication now?
A: Of course, if somebody can check me out and tells me that I need to take medications, then I would take medication.

"So I call my brother - he said try - try to go on diet - don't take medicine yet. You know your feet like that so - I scared, so I take medicine."

"It seems it is my - an ordinary life. Because I know I am taking my medicine..."

A: Well, I didn't really feel anything and I didn't really get worried, because he gave me something take...
Q: Umm hmm.
A: ...Like pills.
A: Yeah. I think I'm more healthy because she [her friend] had that experience already but she told me that she wasn't taking medication.

Q: OK. So was she supposed to be taking medication? Did her doctor want her to take medication?

A: Yeah. There was a need. But she has a doctor – she should know.

"It's not difficult for me now because for my taking the medicine and not eating too much sweets. That's all."

“They [Filipinos with diabetes] will take the medicine and they will not eat the [wrong food].”

Only one participant declared non-financial difficulty related to taking medication. She complained about the large size of her metformin tablet:

A: And I brought half of the banana – I eat with my - my - my medicine.

Q: Uhh huh.

A: I cannot eat – I cannot take medicine without something, you know.

Q: Yeah.

A: I eat banana then I insert inside.

Q: Oh.

A: Because I cannot swallow.

Three participants described experiences with complementary or alternative medicine. Two of those experiences occurred in the Philippines, one with dietary supplements and one with going to an abularyo (folk medicine doctor):

Q: Umm hmm.

A: And, uhh, he said that, uhh, when he take in the – the Forever Living products...

Q: Forever Living?

A: Yes, ma'am – it's a popular [inaudible]. What's that – now the – from the – these products come from – from Nevada also.

Q: Oh, OK.

A: But they are selling it to the Philippines.

Q: Is it vitamins or food?

A: Umm, it is some multi - multivitamins -- supplemental.

“I collapsed, yeah. And then they – they bring me and they – to the quack doctor – yeah – they brought me to old quack doctor... And almost one month – I'm not really [inaudible], yeah – and then my married daughter told, mommy, and my daughter told to my husband that, daddy, we give you already time that your relative told us that mommy
Another participant learned about preparing bittermelon, noni (inedible fruit used for medicinal purposes in Pacific Islands) and marungay (locally grown squash-like vegetable) from watching the cable TV show broadcast from the Philippines. She reported hearing about these remedies from other Filipinos. All of these plants are available in Hawai‘i. This participant was able to get noni from her neighbor to make her own juice, and reported feeling less dizzy after taking noni juice:

A: Yeah, so. We saw it on the TV – how they make it.
Q: What show is that?
A: On the Filipino channel.

“A lot of, umm, Filipino tell me about other, umm, medicine like Noni, like, umm, bitter melon... Maybe they try it because that – that's what they telling me.”

A: I'm drinking too – the noni.
Q: You're drinking the noni.
A: Umm hmm.
Q: How long have you been doing that?
A: Mmm, about a year already.
Q: OK. You think it makes you feel better?
A: Yeah.
Q: How – in what way do you feel better?
A: I don't feel dizzy now...
Q: How often do you drink noni and how much do you drink?
A: Umm, two – one teaspoon in the morning and one teaspoon in the evening... We saw it on the TV – how they make it.
Q: What show is that?
A: On the Filipino channel... We have a, uhh – my neighbor – I ask sometimes. Because, uhh, mine is still – is also.
Q: Yeah, too young to pick. You need to get big ones.
A: I need the – the fruit.
Q: Oh, the fruit.
A: The fruit – I put – I wash it and I put in the gallon [jug]. And then the juice. Because they get, uhh, the get a juice and they get a [inaudible].
A: I'm also taking the seed of the marungai. My friend say it's good for diabetes so I take it.
Q: So it has - you take the seed or the whole vegetable?
A: The seed, I'm taking.
Q: Oh, OK.
A: And then I eat the fruit and the lips too.
Q: Do you just swallow the seed whole? Is it a big seed or little seed?
A: It's a - just - small.
Q: OK - what color - white, black?
A: Inside is white.

“And, uh, they said the - the bitter - the bitter melon. You squish it and then the juice you drink. That's a - they said that, uh, lowered your cholesterol... In the - last week somebody tell me that, uh, get a tablet of, uh, bitter melon.”

In summary, taking medication was accepted, and even welcomed, by the participants. The investigator’s experience as primary care provider was not as positive regarding patients’ willingness to take multiple medications. The idea that too much medicine was too hot for the body did not come up with these participants. There were only two reports of going to a traditional healer in the Philippines.

*Exercise*

There were 49 significant statements related to exercise. All of the participants reported doing exercise as part of their self-care, even the participant who had a stroke and walks with a cane. Walking was the most frequently mentioned exercise. Most participants reported walking more in the Philippines than in Hawai‘i. Others made a point of measuring their amount of exercise by minutes, or increasing their walking beyond what was required when traveling by bus:

“But I find - I found out that when I go walking, the more rice I like to eat [laughing].”

“But nowadays she goes - I just go out walking, because there is no more farm here. I go walking in the afternoon.”
“My house is far from the bus-stop – so you walk...I go to the second bus-stop, so that's farther, so that's about fifteen minutes going. And fifteen minutes coming back.”

“I have my exercise everyday. I have, uhh, fifteen or twenty minutes, because – around the house – when I walk around the house...I go downstairs and walk around the house. That makes me feel better...”

“Umm, you get exercise. You go walking. Walk, walk, walk, walk...(laughter)

“I – I try to walk in the morning and in the afternoon. Fifteen minutes in the morning – and again in the afternoon – though sometimes I cannot do it if I have other things to do. And – but I'm trying to exercise.”

“He [her brother] keep on calling me, like this – and oh, especially your heart, sister, like this or – so, you know – so I just try to walk, you know –“

“Walking -- but before I go to [health club] – but I don't drive and so expensive.”

A: You know, so I walk -- I walk by my place.
Q: You walk from your house to [this neighborhood]?
A: Yeah. But since I'm walking -- because I have the -- when I check it's hundred eleven.

“Yeah, and then you know what, it's a hill...So sometimes I walk up and down so that I can exercise my heart, yeah...Up and down -- maybe about three times. Ten times I cannot do it anymore.”

“She said, how you manage now your body? I walk – I said that I walk thirty minutes...”

Often these participants relied on walking as their primary form of exercise as well as transportation. Other specifically mentioned exercise was bicycling, dancing, golfing, and swimming. Each of these was mentioned by one participant. These forms of exercise were described as being for fun and to relax:

A: Uhh, some exercise, I think.
Q: What do you do for that?
A: Uhh, before when I'm not working, uhh, doing the -- going around with the bike.

“Well, sometimes I am dancing [laughing]...Dancing with the teenager that [inaudible] in the house that I have had two.”

A: Yeah. Because some Filipinos they have fun [inaudible] – like dancing, like that. So that's what I know.
Q: Do they tend to exercise or dance like you do?
A: Yeah. My companions there - sometimes they go.

“But I swing a lot. I practice sometimes when – we’re not doing in the airport [inaudible] – I practice swinging the club.”

“Because I wanted to swim – because swimming, yeah. But it's so expensive (at the health club), so I just you know walking.”

Three participants described some daily activities as exercise. Those activities included housework and farm work. In all cases the participants were describing work they did in Hawai‘i; for one woman, her farming days on Oahu were a short-lived, past experience which she enjoyed.

“I work at home also by cleaning the house, sweeping around.”

“Exercise – walking. Washing clothes and stretching. And ironing clothes.”

A: ...I make the ground you know.
Q: Wow. Hard work.
A: Yeah. I perspiring.
Q: Yes.
A: About the only thing is the sun shinning on my – my face become you know.
Q: Uhh huh.
A: So I said, oh my goodness. So I wear – I wear hat, I wear the – I pull the grass in the morning.

“And then I feed the pig, I clean the – I shoot water, I sweep the floor...For clean the doo-doo, but I use mask you know, I cannot manage...my nephew has the piggery in Kahalu‘u and we clean the place to plant vegetable... And then we have goat in there you know...We have a chicken.”

Two participants made comparisons between the Philippines and Hawai‘i. Life in the Philippines provided more opportunities for exercise by necessity. For example, all family members, even the woman who was a teacher in the Philippines, are called upon to participate in the rice harvest. Walking outdoors in a non-urban setting was also enjoyed in the Philippines:
“Ah, you know in the Philippines we have a car, but we hardly use—only my brother go to the hospital, like that if they have the emergency—because he’s a senior consultant. He has a beeper, she has a car. My sister has a car, but us, you know, we love to walk. We go to the field to walk and that, so I’m used to—but over here my husband get car. Only [inaudible]—so we hardly walk.”

“In the Philippines we do farm. Not in here.”

“Yes, ma’am, when I was in the Philippines I usually go to the farm also to gather tobaccos, gather vegetables to help my—my father by—you know in the rice fields—you know when the rice already harvests.”

In summary, participants reported less difficulty with exercising than with diet. Walking was the primary form of exercise, but other recreational exercise was pursued by four participants.

**Monitoring**

There were 12 significant statements by eight participants regarding monitoring of blood glucose with a specific test. As a subcategory of monitoring, four of those eight participants made an additional 12 statements about monitoring their weight. Statements were coded as monitoring if specific tests or results were mentioned, or if a participant spoke of checking or watching results. Monitoring of the feet by annual testing of sensation with a monofilament was mentioned once:

“Especially the yearly testing and the test with a small stick.”

Monitoring blood glucose with a glucometer was most frequently monitored, with five participants stating their number for their glucose reading. The first two responses below reflected observed improvement in numbers with diet and exercise changes or with starting medication. The second two responses reflected some alarm at numbers viewed as too high or too low:
Q: Why do you think it's good? How does it help you?
A: Because my blood sugar come down like that.
Q: OK. Good.
A: Before I had my blood sugar is 245. Then the other week (not this week) - 108. Now 101.
Q: Great. Great. Now do your friends at work know what their numbers are like you know what your numbers are?
A: Yeah. Yeah. They know. I'm telling them.
Q: But do they know theirs?
A: I do not know. Because once - maybe they are not often go to the doctor. They only once maybe sometimes. Whenever I talk to them they do not tell me anything about the blood sugar.

"But since I'm walking - because I have the - when I check it's hundred eleven."

"So they said to me that, oh you know your sugar is high - one-hundred forty-four - I say, how come - I said, because sometimes you know our LPN - can you please check our you know, like that."

"When I check before - when I check with that [glucometer] - it's low - it goes to seventy, like that."

Some participants mentioned the process of monitoring their blood glucose with no specific mention of results. Because of the cost of the glucometer strips, regular self-monitoring was recommended to uninsured patients only when they had poor glycemic control and might benefit from knowing the results of their diet and exercise efforts:

"...when you get it - results from your doctor... hmm. And plus I - I check every morning."

A: Because when they get my blood test, they find out that my diabetes is coming lower.
Q: Do you check your own blood? Do you have a machine for that?
A: Every two weeks, they check up here.

"So they fit me one glucometer, like that. Then my blood pressure medicine and then plus my cholesterol high."

"Oh, I know if, umm, if my sugar is low - not - not really low, it's just like in the normal."

Q: Since - now that you're out of the hospital, have you ever checked it - checked your blood sugar when you feel dizzy at night? Do you have your own machine now?
A: Yeah, but I - now it's - I don't use it because no more battery.

Two participants had very different views about self-monitoring of blood glucose.

A recently diagnosed man saw monitoring as a way to be self-reliant and to self-manage without the cost of seeing a doctor. His vision of this was based on the experience of his friends:

A: I was wondering if I will have another appointment here for checkup then I – I'm thinking to buy that, uhh, apparatus to check the diabetes.
Q: Yes. OK.
A: And I guess I can do myself. My friends, uhh, manage by themself. And they already have acquired the glucometer to take by themself. Instead of going to the clinic and - that's what I intend to do.
Q: So they do – they have their monitors already.
A: Yeah.

Another woman who had diabetes for over 20 years was only testing her blood glucose first thing in the morning when she knew she would get a low reading. Her hemoglobin A1c was reasonable, making the chance of very high readings less likely. But high readings made her feel anxious, and she felt she could not handle bad news right now. Since she was paying out of pocket for her glucometer strips, her method of monitoring reflected knowledge of herself and what was helpful and harmful for her.

A: You know, I scared.
Q: So you don't do that [monitoring] all the time.
A: So what I did is – so what I did is – only in the morning you know. But in the evening I don't wanna check already.

"...and then I eat some, umm, sweet – uhh, it become worse, my – my sugar-blood."

In summary, participants monitored blood glucose for reassurance and to see if their lifestyle or medication changes improved their numbers. Absent from comments was using monitoring to evaluate symptoms which suggested either high or low blood sugar.
**Weight Monitoring**

Watching one’s weight was mentioned by three participants. Weighing was a subcategory of monitoring. One participant of short stature was a man who had hypertension which was difficult to control. He lost weight by cutting down to two meals a day after coming to Hawaii. His weight loss down to 123 pounds helped bring his blood pressure to target:

“...before when, uhh, we came here in Hawaii when – when I was still in Philippines I was so fat and about 135 pounds, like that.”

The two women who mentioned monitoring their weight had the highest body mass index of the group of participants. The response below was from a woman who was successful at losing weight in the Philippines after learning of her diabetes diagnosis:

A: Because when I was there, I used to eat too much.
Q: And when did you learn that?
A: When I experienced becoming big.
Q: OK. And are you getting smaller?
A: I wanted to become slim, but I couldn't.
Q: You were trying, but you weren't able to? Is that right? Were you trying to lose some weight?
A: Sure. Of course.
Q: Of course. OK. Do you weigh the same now that you did, say, three years ago when you found out you had diabetes?
A: I lost weight, but just a little...

The next statements were from a woman who had been living in Hawaii for 20 years. Prior to her diabetes diagnosis she had gained weight which she attributed to her husband being a cook and indulging her with sweets. Her weight loss after his death was in part because of a severe clinical depression, but she was also very physically active doing farm work and walking for exercise.
“...my brother – he said try – try to go on diet – don't take medicine yet. Said – and then you walk – because by the time I'm hundred eighty-something pounds...”

“It’s difficult, so – but said, good for you because you've lost weight they said.”

“When you become fat, you're lazy. But that's why – when my mom so surprised, how come – you look like just like a pig. You know the pig. You know the pig?”

A: So sometimes I walk up and down so that I can exercise my heart, yeah.
Q: Yeah.
A: Up and down – maybe about three times. Ten times I cannot do it anymore.
Q: Wow, you sound like you were in good shape then.
A: Yeah, that's why I lose weight.

In summary, monitoring blood glucose and weight provided feedback to participants. The participants who engaged in monitoring and knew their numbers also described behavior change and had good glycemic control. Participants who never monitored their blood glucose tended to have worse glycemic control.

**Medical Visits**

There were 29 significant statements related to medical visits in the self-management domain. Most participants and their friends and family with diabetes went to the doctor for treatment:

“Maybe – you know – I experience, yeah. When I go to the private doctor – they did not tell you what they are doing... They tell you, you take this medicine. But they will not tell you that, you go exercise [inaudible]...And control your food.”

“Uhh, my nephew – I have learned that he is taking also medicine – he also go to the doctor like my father has a doctor too.”

“Like me. They [her friends] go to the doctor.”

“And they – they said that you have diabetes. They said you have diabetes. You go for a – for the clinic – they said immediately. “

“Uhh, they [her friends] are – they consult a lot with the doctor.”
"I don't cry anymore. I don't really feel anything anymore. 'Cause I'm also coming here to get, um, treated – so it seems that I'm feeling better."

Other reasons for medical visits included getting feedback or information, or because the visits was required for work:

"And I don't see any doctor except when I'm required to."

"I was referred [to CHC] by Aloha Medical Mission. And I don't see any doctor except when I'm required to."

"Uhh, I guess the way I would know [how my diabetes is doing] is go for another checkup."

A: That's why I feel sad because when I got here, I couldn't go to the doctor anymore. Dr. Cachola said that I have little diabetes, but until now I don't have anybody. I cannot go to the doctor.

Q: OK. So you don't know if you're doing well. Going to the doctor was a way to know how you were doing? Is that correct?

A: I have no money, so I cannot go to the doctor.

A: Yeah. I don't know because when I was in the Philippines, I did not check.

Q: OK. So you had this checkup in Hawai‘i?

A: Yeah.

Q: Why did you not get checkups in the Philippines?

A: Because I got only checkup for my blood pressure, like that. It got [inaudible] so they give me medicine – that's all. They did not checkup my blood test or if I had diabetes.

Q: OK. Do you go to the doctor regularly?

A: Sometimes because I'm taking here already.

"I tell them – but they have also a personal doctor. So they go to their doctor."

"Maybe no. Because here we learn too much about the diabetes. They just go to doctor and take the medicine – they take like that. Maybe they tell them about exercise maybe."

"I do not know. Because once – maybe they [her friends] are not often go to the doctor. They only once maybe sometimes. Whenever I talk to them they do not tell me anything about the blood."
The Domain of Family

The family domain was the largest of the four domains. There were five categories as follows, with the number of significant statements in each category in parentheses: family members (168), Filipino (152), advice (41), motivation (22), and support (13). The family is presented as a cultural theme at the end of this chapter because of the importance of the family in the participant’s ability to self-manage with diabetes. The family categories and their subcategories will be presented in descending order based on the number of significant statements in each category.

Family Members

Family members were often mentioned in the context of introductory remarks when participants were asked to tell the investigator about themselves, as well as while relaying the story of their diagnosis of diabetes. The role of family members will be presented later in this chapter in other categories within this domain. The most frequently mentioned family members were children with 51 statements, followed by spouses with 32 statements and siblings with 23 statements. In-laws and parents were each mentioned 15 times. Other family members mentioned fewer than 10 times each were grandchildren (9), nephews (3), nieces (3), cousins (2) and auntie (1).

Family members were a source of advice, motivation and support. Each of these categories will be presented in its own section. Participants distinguished first degree relatives as more valued, and family members related by marriage as not real family who know you and would provide emotional and financial support as well as blood relatives would:
Petitioning

A sub-category in the family domain was petitioning, with 12 significant statements from seven participants. Stories about petitioning were usually included in the participants’ introductory remarks. Petitioning was done by children and siblings, and participants spoke of petitioning their children and siblings as well. The uncertainty and waiting involved with petitioning was expressed. This same uncertainty about what the future might hold was expressed about participants’ future health status. One participant who had petitioned her single daughter was also concerned about who would take care of her in Hawai‘i if she became an invalid:

“And right now I petition my single daughter—we wait already for ten years... I'm worried because, especially if I don't—I don't have any family members here—so who will take care of me if I become invalid.”

“That's why—only by myself over here...Yeah. And my son.”

Q: Oh, OK. Great. How long were you waiting before you were able to come?  
A: Oh, we wait for almost nineteen years.
Q: Nineteen years. Wow.
A: Yes.
Q: So you've been waiting a long time.
A: 1997 when they petitioned us.

A: Uhh, my—my husband—uhh, my husband apply already for citizenship to get my married daughter and son—to bring here.
Q: To bring her here. OK.
A: And right now I petition my single daughter— we wait already for ten years.

Q: How did you come to be in Hawai‘i?
A: Oh, I was petitioned by my daughter, who is married to a Hawaiian—to a Hawaiian-born.
Q: Mmm hmm.
A: That's why they petitioned me here.
Q: OK. When did they petition you?
Q: So – OK.
A: So that it almost 1996 already.
Q: OK. So they – and when did they start the petition process? What year did they petition you?

Q: How did you get here?
A: My son.
Q: Your son petitioned you? OK. And who else besides your son, from your family, who else lives in Hawai'i?
A: Just my son.

A: No, actually I am married to a local lady – and that's how I get here.
Q: Oh, OK.
A: She petitioned me to come over here.
Q: Oh, OK.
A: So I got here in Hawai'i.

Another aspect of petitioning concerned whether the person petitioned would like living in Hawai'i. There was never a question that a person who was petitioned would come. It was a given that someone petitioned by family to come to Hawai'i would come without question:

A: My brother petitioned me to come.
Q: OK. So he was...
A: ...and I like it here.

A: I brought my mom, but – she doesn't like over here.
Q: She went back.
A: That's why I never petitioned my – my brother and sister...

"Just me [coming to Hawai'i]. Because my daughter petitioned me."

"..He [her brother, an internist in the Philippines] wrote a letter to the immigration that said, you only want to – to gain more knowledge over here then you will go back to the Philippines. So they denied to stay here. But it's okay – I said, because he only take vacation over there for one year."

In summary, petitioning for family reunification was commonplace. The uncertainty about how long the wait would be added to an already uncertain future for
those with diabetes. A desire to have family in Hawai’i, first degree relatives in particular, was strong.

Filipino

The category of Filipino in the domain of family contained four subcategories of emotions (87 statements), friends (25), character (22), and Filipino-American (10). Statements in the category of emotions were feeling statements made by the participants about themselves or about Filipino family and friends. When asked if she had Filipino friends or family here in Hawai’i, one participant said, “We are all Filipino.” The meaning of her statement was also conveyed by several other participants.

Emotion

The most frequently mentioned emotion was worry (25), followed by feeling good (18), fear (12), sadness (11), thankfulness (10), uncertainty (9), and confidence (2). The counts for positive emotional feelings were 30, and 57 for negative emotional feelings, i.e., worry, fear, sadness, and uncertainty. This suggested that the overall emotional state of these participants might be negative due to the pervasiveness of worry. As a rough measure of the emotional content in each interview, the number of positive emotional statements made during the interview was divided by the number of negative emotional statements for each participant (see Table 6). Participant #101 had the highest ratio of positive to negative statements and also had the lowest hemoglobin A1c and had attended the Chronic Disease Self-Management Program. Four of the five participants who attended the Chronic Disease Self-Management Program were at or above the
median ratio of the number of positive emotional statements to negative emotional statements.

The rank ordering of participants in Table 6 showed three exceptions to this association. All but participants #02, 06, and 07 had rankings in HgbA1c and ratio of positive to negative statements which were three or fewer rankings apart. Participant #02 had positive emotional feeling, but also had the highest hemoglobin A1c. Her past success with improving her glycemic control may have meant she has high self-efficacy for future success in self-managing with her diabetes. Participant #06 had suffered the most losses from his diabetes, including renal complications and loss of employment and its benefit of medical insurance. Participant #07 may have been suffering from a recurrence of her clinical depression, so was feeling bad even though her hemoglobin A1c was reasonable.

Worry

Worry was the most frequently mentioned emotion by participants. Worry was understandable and not unexpected in their uninsured situation. Ten of the 11 participants spoke about worry. Participants were most frequently worried about their health and their diabetes and possible complications in the future:

"I think they have some problems – like people I've seen that I will go to – they call it insulin – and I wish I don't go to that extent."

"Maybe I don't have – only I'm always worried about that sickness... Yeah. I'm always watching for my diet... I guess only – eat little rice, like that... And I don't eat the – the salty foods...Sometimes I eat salt but not always."

"Well, sometimes I feel weak, because I'm always worried about my diabetes."
A: My, uhh, my other friend, umm, the legs are becoming black. What do you think is that?
Q: Mmm. OK. We'll talk about that later. Black legs – we're gonna talk about black legs and knee – and your knees.
A: That's why I'm worried, so I'm trying – I'm being careful in what I eat.

“It's just that if – my blood-sugar goes up and that's when I'm worried and then, umm.”

“I was worried ‘cause it might cause my sudden death.”

“Sometimes, uhh, I'm worried about my – if I cut my – my legs and I become blind...”

“...because I have – umm, it's – I'm worried about my diabetes, because my knees are always sore and I think the diabetes is causing it – what do you think?”

“So I'm little bit concerned about my health now.”

The next most frequent causes of worry related to negative financial impact and burden on the family:

A: Yeah, because I won't be – I will be totally – I cannot work.
Q: Umm hmm. What would...
A: And I cannot have my family too.
Q: Umm hmm. Umm hmm.
A: And I will be given – my family would have a difficult time taking care of me.

A: I always think of it also if I don't feel good.
Q: Mmm. Can you talk more about that? What do you think of...?
A: Well, I...
Q: ...When you think about it?
A: I'm thinking of my family.
Q: Umm hmm.
A: I'm thinking that I don't have any insurance or what – so where shall I get money if something happens to me?

“I'm worried because, especially if I don't – I don't have any family members here – so who will take care of me if I become invalid.”

A: Sometimes I get worried. Umm, I'm worried about what's gonna happen...
Q: Umm hmm.
A: ...In the future. And I'm worried that I don't have any money for doctor.

“...Because you know my son – I don't wanna tell him, because – lately I told him – because you know my son I don't want him to be worried.”
Other participants recognized that worrying was not good for their diabetes and had made conscious efforts to try to relax. Some expressed relief of worry after getting medicine and coming for regular medical visits. Others were able to stop worrying when they could maintain behavior changes of diet and taking medicine. One recent immigrant remembered having many worries when first coming to Hawai‘i, but she was able to go out and socialize once she had been in Hawai‘i longer. She characterized thinking a lot about problems as a Filipino trait, especially thinking about family back home after immigrating:

“Oh, and – being a Filipino, you think a lot. You think other things. You think about your, umm, family – you think about other things. And now that I don’t think a lot of those problems, it helps me with my diabetes. Because before when I just got here, I used to think a lot.”

Q: And did anything change in your life when you found out you had diabetes?
A: Only worried about it.

A: I used to worry a lot.
Q: Umm hmm. So it’s better now. What do you think has made it better for you? Can you tell me some more about that? Or – or how did that change happen for you? What made – what made that happen?
A: If I think a lot or worry a lot, it affect my illness. So now I’m trying to get rid of thinking a lot.

“I sometimes kind of worry if it might get worse. But then uh, I just don’t think about it a lot.”

“Well, I didn’t really feel anything and I didn’t really get worried, because he gave me something to take...”

“Relax. I’m not thinking about what I have diabetes or not. Because I am worried that’s not good for me – for my diabetes.”

“I’m not thinking about, ‘oh, I’ve got diabetes’ – like this. Because I take my medicine – OK. And I’m not eating too sweet. Even I go back there, will not eat too much sweet.”

Q: OK. How do you do that, [her name] – what do you do to – to try to not think a lot?
A: I go out – and so I – I can avoid to think and...

In summary, worry was a common emotion which some participants were able to manage. Reducing worry came more from cognitive changes and maintaining behavior change rather than actual outcomes. Favorable lab results were not mentioned as a reason for worrying less. Because this emotion cut across all the domains, worrying will be presented as a cultural theme at the end of this chapter.

Feeling Good

Feeling good was a global assessment that one’s diabetes was doing well, and one was healthy and happy. Feeling good was mentioned by eight participants as a current emotional state, or in the case of the participant with clinical depression, an emotional state she recalled from the past.

“Hmm, I know that my diabetes is good – I feel good.”

“I think I’m healthy.”

A: I feel good.
Q: Umm hmm.
A: You know. I said, whoa it’s good.

A: It's not good for your health. You want to feel good.
Q: OK. But you feel good right now – is that right?
A: I feel good.

Feeling good described an emotional state which could be the result of doing well with diabetes, or exercise, or helping family, or finding an enjoyable job:

Q: Anything else that lets you know when you're doing well with your diabetes?
A: I feel happy.

“Come down – I said – so that – you know, so that you feel good. I know you're a country lady – you're – so what I did – we plant vegetable.”
“So I help them – you know, I feel good, you know.”

“I – I have my exercise everyday. I have, uhh, fifteen or twenty minutes, because – around the house – when I walk around the house, I go downstairs and walk around the house. That makes me feel better…”

“I’m happy to take care the old patient, the elderly.”

For some feeling good was the absence of illness symptoms or an absence of worry, sometimes compared to an earlier time when that was not the case:

“I just feel – as I said, I just feel I am not sick.”

“But sometimes – I been – I've only – if I think here – my – I have this inner strength inside if I think about coming here.”

“Well, sometimes I don't – in as much as I will take my medicine and I avoid the foods that I should avoid, I feel nothing – no more, ma'am.”

“I don't cry anymore. I don't really feel anything anymore. 'Cause I'm also coming here to get, umm, treated – so it seems that I'm feeling better.”

“Because all I know – I said, is I don't feel anything.”

“I sometimes kind of worry if it might get worse. But then uhh, I just don't think about it a lot.”

“Umm – no. It not bother me.”

In summary, feeling good was how many participants described themselves, but usually in the context of uncertainty, that bad things could happen in the future. Some participants described actions they took to feel good, such as going for a walk, socializing outside of parties, or drawing upon an inner strength that they could self-manage.
Fear

Fear was the next most mentioned emotion, but by only two participants. One participant was elderly and had already suffered a stroke; the first four statements below were hers. The other participant had a son in college in Seattle; the last three statements were hers. While worry was more cognitive, fear was emotional. Fear of death, fear of complications, and fear about eating certain foods were each mentioned four times.

"I'm scared, 'cause I see her legs, but she told me, I, it's okay, I drink the diet [soda] – my friend.
...you know your feet like that so – I scared, so I take medicine."

"Yeah. I scared to be blind."

"So I'm afraid of the sugar. I'm not using the sugar, only the Equal. 'Cause I'm afraid of that."
"I'm trying. Because I scared to die early."

"...now, I don't eat things like this anymore – those are like, mochi –Filipino eat –Filipino mochi – or homemade candies. Yeah, I have that before, but now I'm afraid... He's eating that. But me, I'm afraid even."

"I feel lonely. I feel scared. Yeah. That's why I'm trying to do my best to – to be you know well – to you know – to be healthy. Plus I scared, you know, something happen to me. But anyway that's why – I have my life insurance, but – I need to see my son."

Q: How you...
A: I scared.
Q: ...How does your diabetes make you feel scared?
A: I scared to die. You know what my son said? Mom, without you I will follow you [inaudible].

Q: Your heart is going fast.
A: Yeah, just like fast. So I said, oh my god I don't want to get the heart attack.

The participant who was clinically depressed was afraid to check her blood sugar in the evening because she anticipated a high reading and did not want bad news. She
also attributed fear to her son which seemed more like her fear projected on to him, i.e.,

that having a girlfriend in college would interfere with his studies.

Q: Do you ever check your blood-sugar when you have a headache to see if it...
A: I scared.
Q: Oh, OK.
A: You know, I scared.
Q: So you don't do that all the time.
A: So what I did is — so what I did is — only in the morning you know. But in the evening I don't wanna check already.

A: He don't have any girlfriend yet — he's scared.
Q: He's scared of girlfriends [laughing]?
A: Umm hmm — he's scared. I said, study hard first, before girlfriend.
Q: Yeah.
A: Because easy, the girlfriend - if you finish — it's the one — when he was in Farrington High School.

In summary, the youngest participant, a widow with a college age son on scholarship and with no immediate family in Hawai‘i, was afraid of an early death. For the oldest participant, fear of amputation and blindness were foremost. Based on risk calculation, both participants were likely more afraid than they needed to be based on their current levels of glycemic and blood pressure control.

**Sadness**

Sadness was the next most often mentioned emotion by four participants with 11 significant statements. Sadness was expressed when describing learning of the diagnosis of diabetes:

“Not really — umm, I didn't really feel anything except that I was sad because now I know I have diabetes and I didn't have it before.”

“I felt sad because I just found out that I have diabetes — didn't have it when I was in the Philippines. Plus I was away from my family.”

“Oh, I was sad because I knew I was sick but the doctors said it was easy to cure.”

158
A: Nothing – he just said, what can we do when they found out you had that illness.
Q: Umm hmm. Umm hmm. How did you answer him when he said, what can we do?
A: Nothing.
Q: Uhh huh. OK.
A: I cried because of course now I’m – I have this illness.

For two participants, sadness was caused by the death of family members. The second statement was from a man whose brother died from diabetes many years ago. His brother’s death was an ever present reminder to take care of himself.

“And then last, uh, June I lost my mother. And then last Christmas I lost my brother. So – that’s why it’s hard…”

Q: Yeah.
A: My older brother.
Q: Wow.
A: That’s why I’m taking – I’m taking precautions.
Q: Yeah.
A: Because I’m always thinking of him.

The participant with clinical depression recognized her sadness was caused by her depression. Although at the time of the interview she was not receiving treatment for her depression, she intended to do so soon.

“…– maybe my sugar is up, I said. And sometimes, you know, you like to cry. I don’t know – I think that’s the part of that sickness [depression].”

“So, come on auntie – let’s come to my piggery you know, so that – because in the house you only cry.”

“I’m not – before I like to go you know party like that with my friend. Now I don’t want. Just like you want to stay home there and – just like you’re depressed. Yeah, like that.”

Financial reasons for sadness were also mentioned. One participant defaulted on the mortgage to her house when she became a widow. The second participant could no longer afford to see a doctor like she used to do in the Philippines.
“So I cannot help – I lost my house. So I cannot help – you know – do anything. But at least it's helped my you know, my health.”

“That's why I feel sad because when I got here [in Hawai‘i], I couldn't go to the doctor anymore.”

In summary, the same reasons for fear and worry caused sadness when potentially upsetting events actually occurred. Three of the participants told these stories with little visible emotion and did not dwell on past events. The fourth participant who was clinically depressed was weeping during parts of her interview. She was coping with missing her son and with bad memories connected to starting over in a new job with her old employer. Sadness was not related to HgbA1c level.

**Thankful**

Four participants spontaneously expressed gratitude for the help and education they received at CHC. These comments were made at the end of the interview when participants were asked if they had anything else to say. Three of these four participants had attended the Chronic Disease Self-Management Program. They had more contact with the Filipino health center staff than other participants when they attended this weekly workshop held over six weeks for a total of 15 hours. The people and relationships with staff at CHC Center was another reasons for gratitude. Even the doctor who referred one participant to the health center was acknowledged.

“And thank you for everything – for your help.”

“And, uh, I'm thankful to all of you. To the staff and – of the [health center] by giving me...Assistance.

“Ohh, I just wanted to be thankful for – for your help, Dr. Anne.”
"It's good, because ever since I came here, now I'm feeling better. I got treated here - you help me - so I'm thankful with Dr. Anne."

"I am very thankful for the - I came here to learn so much and for this."

"I - that's it - I am thankful that I have learned that I have this disease earlier so it - I have the time to -to take care or to take medicine - to do the exercise - to cut off my - to change my eating habits. To make me more health. To help myself and my family. And to serve also other people."

"So I'm thankful that I was able to come here and I came to know you."

"I only like to - oh, I - I, umm, heartily thankful to the staff of this institution. Uhh, especially to you ma'am and Marissa... who are helping me more and not only me - others too - to understand to tell or - to educate us about diabetes."

"And thank you to my doctor because he - he is the one who told me that to go to [CHC]."

In summary, participants who expressed gratitude were more likely to have had more contact with the health center and more opportunity to have had positive experiences with making changes in their self-management behavior. Gratitude was related to relationships formed with health center staff.

**Uncertainty**

Uncertainty was expressed by six participants. Uncertainty was different than worry because it had less negative emotional impact and pertained to a lack of knowledge. Uncertainty was about either the present or the future. Uncertainty about the present was focused on symptoms. Participants were uncertain about whether their symptoms were caused by high blood glucose or low blood glucose. None of the participants who had glucometers had ever checked their blood glucose at the time of their symptoms. This lack of glucometer use was in part because participants did not
want bad news and preferred to wait out their symptoms. It was customary at the Diabetes Clinic to provide attendees a handout with pictures which described symptoms on hypo and hyperglycemia. For one participant it was not possible to distinguish her depressive symptoms from possible hyperglycemia.

"Headache – sometimes I get headache – maybe my sugar is up, I said."

"Umm, I feel dizzy like that – I – I know that tells that my diabetes is bad – I don't know if it is high or low that time – but, uhh, when I'm in the hospital they said, if you dizzy it's low."

"So I think – I don't know if that's my sickness or you know the diabetes. I think so. Just like your body's heavy."

"... but when I get diabetes then I became weak – I don't know if – if I become weak when it's high or if it's low – I don't know."

"... and plus, uhh, uhh, sometimes you don't know what gonna happen – so I don't know if my sugar is high or if my sugar is low. The same – look like."

Uncertainty about the future was related to future health status. The following statement was from a participant in the pilot study who had not yet had blood tests. She was later found to be well controlled with her diabetes on diet and exercise alone.

Almost three years after that interview, she has still not required medication for diabetes.

Q: So you think you may not feel good at some time in the future?
A: Of course, because I'm not taking any medication.
Q: OK. And do you think you need some medication now?
A: Of course, if somebody can check me out and tells me that I need to take medications, then I would take.

One participant indirectly questioned the health center's ability to continue to provide free and low cost services into the future, even though the health center had been providing these services for 28 years:

"I hope that CHC's program will not change – that it will always be here to help us – who doesn't have insurance."
In summary, uncertainty about present symptoms was expressed by five participants. Their uncertainty could have been addressed by using their glucometers to test blood glucose. Uncertainty about the future was also not viewed in terms of risk that could be calculated based on the present state. Although risk profiles were done for some of the participants, it was not known which participants had received their own profile which could attach a numeric value to their risks for complications.

Friends.

Friends was the second largest sub-category under the Filipino category in the family domain. Friends was included in this category because the participants’ friends were almost exclusively Filipino. There were 22 significant statements concerning friends. Many times co-workers had become friends, perhaps because of the shared experience of having diabetes. Information about friends was elicited from the structured interview question asking participants to describe how other Filipinos they knew take care of their diabetes. In response to this question, the participants compared themselves to these friends.

A: Yeah. I think I'm more healthy because she had that experience already but she told me that she wasn't taking medication.
Q: OK. So was she supposed to be taking medication? Did her doctor want her to take medication?
A: Yeah. There was a need. But she is a doctor – she should know.

Q: Great. Great. Now do your friends at work know what their numbers are, like you know what your numbers are?
A: Yeah. Yeah. They know. I'm telling them.
Q: But do they know theirs?
A: I do not know. Because once—maybe they are not often go to the doctor. They only once maybe sometimes. Whenever I talk to them they do not tell me anything about the blood sugar.

A: She take also the medicine.
Q: Umm hmm.
A: Yeah.
Q: Anything else?
A: No.
Q: No?
A: And sometimes—I don't like she take a—exercise or what.

A: But I said, how come—you are American now? Filipino put so much—[inaudible] yeah, the food we eat.
Q: Yeah.
A: The way the—Filipino they prepare food.
Q: Yeah.
A: Salty—too much.

Q: Oh. OK. So you say you do know plenty Filipinos with diabetes. Would those be friends of yours or how do you know people—at this clinic or other places too?
A: Yeah. Even in my work.
Q: In your work.
A: They say, “even me—I've got high sugar” like that.
Q: How do the people you know at work take care of their diabetes? What do they do?
A: I tell them—but they have also a personal doctor. So they go to doctor.
Q: They go to their doctors. Anything else? How about what they're eating or their exercise?
A: Yeah. Sometimes we are talking about there what to eat, what we do not eat—like that. I tell them that I'm coming here in [CHC neighborhood] and they are teaching us about diet.

A: Yeah, neighbor, friends.
Q: Friends.
A: Umm hmm.
Q: Friends you work with or friends from church?
A: I work with.
Q: Working friends.
A: Umm hmm.
Q: OK. Umm, how do they take care of their diabetes?
A: They lose weight too.
Q: Umm hmm.
A: They lose weight and then they don't eat too much now.
“Because one time, we talk together – I said, uhh, but we almost the same taking medicine – she said, how come you lose weight and – we have to – before we eat too much – and especially chocolate. So we exchange gift – you giving me chocolate – my goodness, oh. She said, how you manage now your body? I walk – I said that I walk thirty minutes and then I don't eat too much now – I eat only vegetables. Sometimes she has the healthy food you know to put in the microwave. She has that you know.”

Friends were a source of encouragement, support and companionship. One participant who was doing well with her diabetes gave, rather than received, support because she recognized her friend needed to talk to someone about her illness experience.

Q: OK. Did you make any new friends in that class [Chronic Disease Self-Management Program]?
A: [woman’s name].
Q: Does she have diabetes?
A: Yes.
Q: OK. So do you talk about your diabetes with her?
A: She is the one telling me about her illness.
Q: So she tells you, but you don't tell her?
A: I haven't told her mine, because it's just her. Because she really collapsed, so she's telling me her experience.
Q: So she was ill – quite sick – with her diabetes. Is that correct? Or with something else?
A: Yeah. She was telling me that she just – her body just shake and then they brought her to the hospital and it's because of her diabetes.
Q: Was she taking insulin?
A: No.
Q: No. OK. So you've been healthier than her with your diabetes. Is that correct? You felt OK.
A: Yeah. I think I'm more healthy because she had that experience already but she told me that she wasn't taking medication.
Q: OK. So was she supposed to be taking medication? Did her doctor want her to take medication?
A: Yeah. There was a need. But she has a doctor – she should know.
Q: OK. And do you think that you take care of yourself better with your diabetes than your friend is doing?
A: No. She's taking care of her diabetes too. She has a doctor.
Q: OK. But for eating and exercise, do you think that she was doing well with those things – or at least as well as you?
A: Yeah. She was exercising too and she was controlling and she even liked dancing.
Q: OK. Why do you think that happened to her then? Since it didn't happen to you – that it happened to her?
A: I don't know. It's just that it was sudden that she felt sick. She had fever and chills.
“They said, oh – I told – I have two friends that are also diagnosed with diabetes. So they said – they told me that you can control yourself, so I try to. And because they’re already also – have their glucometers, they tell me that, you can control yourself.”

“...expensive [golf], but – wherever my friends go when I feel like going then I go – all over – all over the place.”

Q: Oh, I see. Are your friends pretty much other taxi drivers
A: Yes.
Q: So there’s a group of you.
A: Yes.
Q: And you know each other.
A: Sometimes we make our own tournament by ourself.

“OHH, I think I just told [new diagnosis] to my friends – I think also to my family.”

A: Yes. And I can share [with] them whatever I learn.
Q: So you can take care of each other and help each other. Is that right? OK. Good. Anything else about being Filipino that helps you when you have diabetes?
A: There’s a lot of Filipinos who are diabetics.

Friends were also a source of information and advice:

“UHH, he was referred by – we know – you know we have some friends.”

“We talk together – who they go to when they have their physical check-up – and that’s how I find him.”

“Yes. And I can share [with] them. I can ask my friend what is prohibited or what the doctor is saying.”

“I can tell my friends about it and sometimes they give me some advices.”

There were barriers to helping friends and getting help from friends. Three participants were relatively socially isolated. Those recently immigrated, and one elderly woman who was at home a lot, did not have any friends with diabetes in Hawai‘i. Those participants knew people in the Philippines who had diabetes. Some had co-worker friends with two jobs which prevented them from attending the Diabetes Clinic at CHC. Two of the participants had tried to get their co-workers to attend the Diabetes Clinic.
"I'm telling the story about them. 'Oh, where are you going?' 'Out to [name of CHC]. We started there every week,' I say. They said they like to come back there but no more time because they work full-time. Then after the full-time, they go to the part-time.'"

A: One of my friend.
Q: One of your friends – uhh huh.
A: Yeah, he like – she likes to come here too.
Q: Uhh huh.
A: But sometimes she – no time.

A: Town-mates.
Q: Oh, town-mates, from your town in Philippines.
A: Yes, they have diabetes. I went a long time. And my friend to [inaudible] have diabetes.

"No, I seldom – I seldom see them [friends]. I seldom see them."

"I don't know most of the people here yet, but I have a lot [who have diabetes] in the Philippines."

In summary, interactions with friends allowed participants to compare notes on self-care of diabetes. Friends provided encouragement, information and advice. In the case of co-workers who were friends, this frequent interaction could also provide role modeling for behavior change.

Character.

The category of Filipino character in the family domain had four subcategories of accepted, complaining, lucky, open and stubborn. Character was a small category with only 17 significant statements. All of the statements in this category were made by the male participants. Statements were included in this category which described Filipinos, except for statements about emotions. As previously presented, emotions were placed in a category of their own because of their frequency.
Accepted

The statements in the accepted and open subcategories were in response to the interview question about what about being Filipino makes it hard to take care of one’s diabetes. The men interpreted this question as a political question, while the women either asked for more explanation or interpreted this question as a cultural question. Being accepted referred to Filipinos going to America and other countries without any problem.

“Uhh, for me, I'm very lucky from Philippines, because [inaudible] – they help that – foreign people in America. They are very, uhh, supportive – the people in America.”

“Yeah – the – they are not, uhh, discriminating the people coming here. And everybody they take care. Especially [inaudible] like me.”

“... uhh, for me because I have – I have a lot of experience already going around the world – it's no problem for Filipino. Or – what nationality you are.”

Open

One of the men, a taxi driver, shared his views on multiculturalism. He had lived in Hawai‘i for 26 years, and had completed a bachelor’s degree in sociology at the University of Hawai‘i after one year of college in the Philippines. These statements were subcategorized as open.

“I don't see other people or – try to – label some people.”

“And I can take, uhh, anybody with me or maybe I can get with anybody – as long as they are good with me.”

“I – values of – of [the Filipino] is a matter of who wants to practice it. But then as I said, uhh, I am an open person.”

“I think – I – I see people the way they are and I hope they see me the way I am.”
Lucky

Lucky was used by one participant to describe circumstances relating to current health and health services and was used in the context of being accepted in America. He had suffered renal complications of diabetes which made him unemployable as a seaman. As a consequence of the renal complications he lost his medical insurance. And yet he saw himself as fortunate when compared to his older brother who had died of complications of diabetes when he could not afford the medicine.

“So I'm lucky I'm – I come here in (CHC’s neighborhood).”

“And sometimes, uhh, our medicine is not too much high.”

“Uhh, for me, I'm very lucky from Philippines, because [inaudible] -- they help that -- foreign people in America.”

A: And everybody they take care. Especially [inaudible] like me.
Q: Umm hmm.
A: Yeah. So I'm lucky.
A: Yeah, but luckily for me, since then -- that's a [inaudible]. And then I can still help with the -- the -- the thread on the...
Q: You can still thread the needle, huh.

This same participant described Filipinos as stubborn, pretending, and complaining. His frustration was apparent while talking about this, as if he were speaking about his friends or family but did not put a specific face to these characteristics. He may have been projecting his own feelings.

“Uh, yeah – so – so many I know. Because obviously Filipino and they be – they are being the mind – they are – they're, uh, stubborn.

“They only following the advice when they are in the program – with the program. When they are already done and back living in the home, they forget everything that they know.”

“Yeah. They want to take the doctor advice, don't drink, don't drink, like this, like this – yeah, I'm not drinking – but inside their home they're drinking with nobody.”

169
"Yeah, uh, because some are only, uh – oh, what do you call that – pretending."

"They'll – they'll telling the doctor that yeah, yeah, I'm doing this, I'm doing that. But they kept on doing worse because they're not – that they're not doing the right one. Yeah, that's one of the Filipino habit."

"They're always, uh, complaining that they have diabetes but every time I – I saw them, how they eat their food – they [inaudible – referring to lack of control]."

A: Yeah, I guess, uh, frankly speaking – uh, I know people, uh, like – like me...
Q: Umm hmm
A: ...They're complaining about their life.
Q: Umm hmm.
A: Yeah, they're complaining about that.
Q: OK. So they feel like it's not as good if they have diabetes
A: Oh, yeah – it's worse if you're diabetic.

In summary, Filipino characteristics mentioned by the two male participants were both positive and negative. To view himself as lucky in his situation and accepted and cared for as an immigrant were characteristics facilitating self-management. Being stubborn and pretending to make changes in behavior would impede behavior change and self-management.

Filipino-American

There were 10 significant statements in the category of Filipino-American in the family domain. These statements, made by four participants, were in the context of describing a Filipino who was becoming American. The most mentioned aspect of this transition was adopting American dietary habits, and all of these statements were made by one participant. This woman spoke a lot about food. Her interview was at the end of her day shift as a nurses' aide at a hospital. She judged American food to be healthier than Filipino food, but tasteless. She was willing to try American food, but was clear
about her dislike of bread, tea, and low-salt frozen entrees. She spoke wistfully about her son having lost his taste for rice while away at college.

“You know the way you prepare your food – you know – so it seems that you hardly adjusted with the American food, you know, like sandwiches, salad, you know, the rice, the mashed potato, you know, uh, bread. You know American put bread, yeah – spaghetti like that – we hardly eat that, that’s why. We love to eat our own, you know, food.”

A: You know, my son, you know, he use olive oil with pasta. But I hate pasta – you know my son, he cook pasta with tomato – tomato – it is peanuts. But with the cheese. And with the garlic. You know the garlic he chop, chop.

Q: It’s not very Filipino, is it.
A: Oh, yeah – no he’s becoming American. I think so, my son. So only me Filipino.

“...but me Tagalo. We love meat and we like fried kine with the oil that’s why. So now I’m trying not to do that. Especially my son – said over there he hardly eat rice – over here when you come home – you know last Christmas – he doesn’t like rice – he like only – but expensive, you know – you like only American food.”

“Sometimes she [her co-worker friend] has the healthy food you know to put in the microwave. She has that you know. But I said, how come – you are American now? Filipino put so much – [salt] yeah, the food we eat.”

A: Because they – you know they bought the kind, Healthy Choice.
Q: Healthy Choice, OK.
A: But I don’t like that that’s why.
Q: You don’t like it – OK.
A: This is good, [inaudible].
Q: Umm hmm.
A: Plus she only eat the small amount – small portion. So that’s it. And she drank – drink lots of water – tea.
Q: Umm hmm. Yeah.
A: I’m copying them, but I hate tea that’s why.

Two other participants mentioned other aspects of becoming Filipino-American.

One woman who had been living in poverty in the Philippines spoke of having more choice in what she was eating because of having more money to buy vegetables and fruit.

“When I came here [to Hawai‘i], that’s when I changed. Because when I was in the Philippines, I don’t have money. You cannot change – you just eat anything. You cannot buy anything.”
One man referred to terrorism, and his fear that even though he was Filipino he would be identified as an American in a situation of terrorism.

“Umm, the most important to me is just that getting – getting – people getting killed because people coming in American and they are waiting for – who you are – even you’re a Filipino – you came from here.”

A third aspect of being Filipino in America was equality. One man related his view that being Filipino meant no special treatment, but rather equal treatment, in relation to self-care of diabetes and medical services.

“All I know is that who you are – even you’re a Filipino, you have to follow everything what – what advice for you.”

“They are a – they are a, uh, what do you call that – [inaudible] equally – everybody.”

Advice

Advice was the next largest category in the family domain with 36 significant statements. All participants spoke about advice. Most statements related to getting advice from family (14) and from friends (7). To a lesser extent, advice was received from the doctor (3), other Filipinos (2), the media (1, a Filipino language radio station), other people who have diabetes (1), co-workers (1), and others who did not fit these categories (4). Advice from family who were also health professionals occurred for three participants:

“So I call my brother [an internist in the Philippines] – he said try – try to go on diet – don’t take medicine yet.”

“...he [her brother, an internist] keep on calling me, like that’s – he keep on calling me, like exercise. And then the food too.”

Q: Can you tell me more about that? What happened when – when you told them?
A: Oh, that's what my sister [her sister-in-law, a nutritionist]...
Q: Uhh huh.
A: In the Philippines.
Q: Oh.
A: He has his own assistant in Kaiser Hospital.
Q: Oh, OK.
A: And then she told me that – you eat like this, like this, like this.
Q: Mmm hmm.
A: Control.

“My – my niece [a nurse] from the mainland told me you have diabetes so you gotta go to the clinic.”

“You have high sugar – you avoid eating sweets. Don't put plenty sugar in whatever you drink.’ Then I do not drink soda.” [Advice from her niece, a nurse from the mainland visiting her.]

With family members who were not health professionals, but who lived with the participant or saw them regularly, advice was more in the form of reminders and encouragement. Their advice occurred at the time of diagnosis but was more often ongoing, and related to avoiding stress as well as to diet and exercise.

“…they know that I had high sugar, he said avoid eating sweets, like that.”

“That's why he keep on calling, how are you mom? I want you to be healthy mom. Mom, you're still fat you have to walk. I want you to be healthy mom, you know. I want you to buy a house. You know, I want you to be happy.”

“So I wanted to fight [her situation at work], but my son said no – enough already. Just say that to me – just work. [inaudible] he said – I will bring you money. But I don't know.”

“…but when I go to the hospital and I'm ready to – OK – that's the time that they [her children] told me like that – like that you're doing like this mommy and like that.”

“He [her husband] just told me I have to go to the doctor.”

“Uhh, but dad is always remind me, mom, mom, don't eat like...”

“It's not curable and, uhh – dad also advising me to take my medicine – to do exercise and to avoid foods that are not good.”
None of the participants seemed bothered by ongoing advice from their family. On the contrary, they expected advice from their family members. When directly asked about her view of family advice, one woman saw it as a sign that her family member cared about her.

Q: Ah, she got mad at you.
A: Yeah [laughing].
Q: I was gonna ask you if that was helpful or if that was, uh...
A: Was helpful.
Q: She – you felt it was helpful – her advice?
A: Yeah. Yeah.
Q: OK.
A: I know she get mad because, uh...
Q: Uh huh.
A: She – she cared for me.

Advice from doctors was characterized as following directions. In one case, a woman who was having her first visit at CHC described using second-hand advice from her friend’s doctor.

“Just controlling yourself and just following everything that they [doctors, nutritionist] say which is not good.”

“...I am also thinking about it, so I better do the – I better drink my medicine, to do exercise, and all the things that you [her nurse practitioner] advise me to do.”

“Because the doctor will tell them [Filipinos] to take medicine and the doctor tell them not to eat the food that is not good for them.”

“They [doctors] tell you, you take this medicine.”

“I can ask my friend what is prohibited or what the doctor is saying.”

Next most mentioned sources of advice were co-workers and friends. In these cases, there was not always an indication that the friends and co-workers were Filipino.
Advice was taken about which doctor to see, and what alternative therapies were available for diabetes.

“And I tell them [co-workers] that I'm trying to avoid eating foods that are not good and also I'm trying to do exercise.”

“We [co-workers] talk together – who they go to when they have their physical check-up – and that's how I find him.”

“And I can share [with] them [co-workers].”

“...they said, oh – I told – I have two friends that are also diagnosed with diabetes. So they said – they told me that you can control yourself, so I try to.”

“My friend say it's [bittermelon] good for diabetes so I take it.”

“Uhh, he [doctor] was referred by – we know – you know we have some friends.”

“A lot of, umm, Filipino tell me about other, umm, medicine like Noni, like, umm, bitter melon.”

“Maybe they [Filipinos] try it [noni] because that – that's what they telling me.”

Sometimes advice was remembered without recalling the specific source of the advice. This advice was not necessarily supported by medical evidence.

“Somebody said that if my body gets too hot, then it affects my diabetes. My diabetes will go high.”

“Some people – they just said. I just heard from them that if your body is too hot, then diabetes will go up.”

“And then this guy [an obese Filipino man at the diabetes clinic] told me, oh, I'll just eat whatever I can. That's okay, because I'm hungry.”

In the case of the oldest participant, she heard about the Diabetes Clinic at CHC on a local Filipino radio show on which CHC’s Filipina nurse was interviewed. Although she had a private physician, she decided to come to the health center because of the radio show.
“Yeah, and then I heard in the radio about [Filipina nurse]. So I— I told [name—her daughter] to call up [the Filipina nurse]. ‘Cause I heard it from the radio. I heard from the radio, that's why. I told [name—her daughter] about that so we came down.”

Three participants spoke of giving advice to family, friends, and people with diabetes generally. One woman described giving advice about diabetes to her elderly father, only to have her advice rejected because of their age and generational differences:

“And you know also—and you know the old people, they're—says oh I know more than you—if you advise them, I know more than you.” [laughing].

“And I'd like also that—to encourage other people who has the diseases too to come and see you so that they will be benefited also.”

“I can tell my friends about it and sometimes they give me so advices.”

In summary, advice was freely sought and freely given. In regard to advice from family, it was almost an expectation that advice would be given as a sign of caring. The participants who worked were able to discover which co-workers also had diabetes, and extended their circle of reciprocal advice to the workplace. Advice was another category which crossed all the domains, and will be presented as a cultural theme at the end of this chapter.

Motivation

Motivation was the next largest category in the family domain with 22 significant statements made by seven participants. There were two subcategories of motivation, future and individualism. Significant statements were considered motivation if they referred to reasons why participants engaged in self-management. The most common
motivation for self-management was continued life. Two participants had experienced
the deaths of their brothers from complications of diabetes:

A: My - my oldest brother - eldest brother - [inaudible] - we cannot afford to buy
medicine [inaudible] - and he died.
Q: Yeah.
A: My older brother.
Q: Wow.
A: That's why I'm taking - I'm taking precautions.

A: And my other brother died three days ago.
Q: The one here?
A: Yes.
Q: Oh. I'm sorry to hear that.
A: When he came here five years ago, he was diagnosed with diabetes and he die three
days ago at St. Francis... I don't want to die yet and I don't want - I'm not following in his
steps. I don't want to die yet.

"I'm trying. Because I scared to die early."

Two participants expressed solidarity with other Filipinos. In one case, an elderly
woman came to the health center because of hearing about the Diabetes Clinic on a
Filipino radio station. In another case, taking care of diabetes seemed to be important in
part because the participant was Filipino. This solidarity may have been accentuated by
the participants’ exposure to the diabetes awareness media campaign conducted in the
Filipino community one year prior to the time of the study interviews.

"I take care - even I’m a Filipino - I take care of my diabetes because that is important."

"Yeah, and then I heard in the radio about [Filipina nurse]. So I – I told [name – her
daughter] to call up [the Filipina nurse]. 'Cause I heard it from the radio. I heard from
the radio, that's why. I told [name – her daughter] about that so we came down."

Three additional reasons for motivation for self-care were achieving measurable
improvement, having one's family by living longer, and being useful to others by staying
healthy. Two of these three reasons for self-care were directed toward others and
altruistic. One participant recalled the gradual lowering of her blood sugar with a sense of accomplishment:

A: Because my blood sugar come down like that.
Q: OK. Good.
A: Before I had my blood sugar is 245. Then the other week - 108. Now 101.

"That's why I should be careful of myself too - I have my children by taking care of myself."

A: Uhh, my - my husband - uhh, my husband apply already for citizenship to get my married daughter and son to bring here...And right now I petition my single daughter - we wait already for ten years.
Q: OK. So you wanna live a long time so you can get them over here, huh?
A: Yeah.

"I - that's it - I am thankful that I have learned that I have this disease earlier so it - I have the time to - to take care or to take medicine - to do the exercise - to cut off my - to change my eating habits. To make me more health. To help myself and my family. And to serve also other people."

Future

A subcategory of motivation was the future. When participants thought about the future, they were motivated to do things today to avoid problems in the future. Problems in the future included loss of health and financial hardship if unable to work.

"But you know sometimes, Anne, it's hard - but if you think that it will give you more worse. If it will make you worse. Yeah. You will forget that you have a hard time..."

"So I cannot help - I lost my house. So I cannot help -you know - do anything. But at least it's helped my you know, my health."

"...because I wanna work - because I'm thinking about my retirement. I [inaudible]. When I cannot pay my house I wanted to bring out my [inaudible] - but the lady said, no this is for your retirement."

"...not really - not really changes, but maybe about the way I look at my health especially I'm getting older then - a little bit more cautious."
“Uh, part of it is getting older and, uh – I – I guess if I will get ill it’s – if I get really sick it’s my concern. How I will pay bills.”

A: I – again I might be tempted to eat what other people eat and then I might be drinking more rather than what I drink.
Q: Uh huh.
A: So, which might have an affect with my health, so that’s the reason I try to – not to go out.

*Individualism*

Another subcategory of motivation was individualism. These significant statements were made by one man who was self-employed and newly diagnosed with diabetes. Instead of depending on medical visits and doctors, he was determined to self-manage independently. He obtained a glucometer from the health center and instruction from the Filipina nurse on its use. However, four months later at the Diabetes Research Party for the study participants, he had not been testing regularly because he had trouble with the machine. He was an outlier in that all his support came from his friends rather than family, perhaps due to his wife’s ill health.

Q: Oh, OK. Do you have your own taxi? Or you work for a company?
A: Uh, I have my own taxi.

A: I was wondering if I will have another appointment here for checkup then I – I’m thinking to buy that, uh, apparatus to check the diabetes.
Q: Yes. OK.
A: And I guess I can do myself.

“I feel that anybody would just do what they like to.”

“But they [his friends] tell me that they can, uh, manage by themself. And they already have acquired the [glucometer] take by themself. Instead of going to the clinic and – that’s what I intend to do.”
In summary, motivation to engage in self-management came from many sources, the foremost being family. Participants were future oriented in their reasons for engaging in self-management behaviors. One participant was motivated to self-manage independently, perhaps for financial reasons or because he valued self-reliance.

Support

The smallest category in the family domain was support, with 13 significant statements made by seven participants. Statements described both getting support (10) and giving support (3). Support was received from family and friends. There was only one participant who had no friends or relatives who had diabetes, and her spouse was her main supporter. Support came in the form of showing concern, encouragement, financial support, and providing transportation:

“I know she get mad because, uh... She – she cared for me.”

“Nothing – he just said, what can we do when they found out you had that illness.”

“So I – I told [daughter’s name] to call up Marisa. 'Cause I heard it from the radio. I heard from the radio, that's why. I told [daughter’s name] about that so we came down.”

“And because they're already also – have their [glucometer] they tell me that, you can control yourself.”

A: But, uh, then because with the words of my friends that I can take care by myself then I will try to.
Q: You're encouraged. Yeah.
A: Umm hmm.

Q: And how about paying for the medicine. How did you manage that – and paying for the doctor?
A: My husband, uh – my husband helped me for that and I have – I have work too.
For one participant, support came from her boss after the death of her husband. Her job was held open through an extension of her bereavement leave, during which time she returned to the Philippines:

“I said, you know, I cannot come back [to work] already, because [husband’s name] not I cannot manage myself...My boss said – my boss said – no come – and then, uh, we will help you as long as I can help you.”

Support was given to friends, family and co-workers. In the first statement, a participant lived on her nephew’s farm and helped with the farm work. In the second statement a participant was persuading her co-workers to come to the diabetes classes at the CHC. In the last statement, a participant befriended a fellow attendee at the Chronic Disease Self-Management Program and became her confidant.

So I help them [nephew and his family] – you know, I feel good, you know.

I tell them [co-workers] that I’m coming here in [CHC neighborhood] and they are teaching us about diet.

A: She [friend] is the one telling me about her illness.
Q: So she tells you, but you don’t tell her?
A: I haven’t told her mine, because it’s just her. Because she really collapsed, so she’s telling me her experience.

In summary, support was received and given primarily to family, but also to friends and co-workers. Support was mentioned by seven of the participants as important to their self-management in the areas of monitoring, managing emotions, medication and medical visits. Statements about support were not elicited directly from structured interview questions, but came up during eight different questions. Two statements were elicited from the question about who they told when they found out they had diabetes.
Cultural Themes

From the data analysis, four cultural themes emerged. For each of these themes there was data in all four domains. Each of these themes had an impact on self-management for these uninsured immigrants with diabetes.

Rice Is More Than Just a Starch

“I don’t eat too much rice, but sometimes you are craving, you know.”

Most Filipinos lived in the province, and most immigrants coming to the U.S. as adults had the experience of participating in the rice harvest with their families. They had fond memories of helping parents, being with brothers and sisters, and working hard together during harvest time. No matter one’s station in life, when harvest time came everyone went to the fields. The physical labor in farming was also remembered as an activity which required much energy expenditure and therefore increased intake of rice.

Elderly parents who continued to farm in the Philippines were more likely to develop their diabetes when very old and no longer able to farm. Their children who came to Hawai’i developed diabetes in middle age. These immigrants felt they were forced to change their rice intake because of their diabetes, while their parents viewed this as unconscionable. The lifelong habit of eating rice frequently and in large amounts was difficult but not impossible to change, but giving up rice was like giving up the past.
Eating different varieties of starch was seen as the way that Americans eat. For a Filipino to stop eating rice was a sign of losing one’s culture. When Filipino immigrants developed diabetes, they were universally told that their relationship with rice would have to change. This dietary advice often cast rice as a bad food. Shifting one’s view of rice from something to celebrate and experience in abundance to something to be wary of and to limit was a major transition.

Rice was always available, even to the very poor for who it was the only food source. Life long habits of eating rice three times a day seemed harder to change for those whose transition to becoming Filipino-American was more difficult. If immigrants had more family to connect with in Hawai‘i and if their expectations of immigrating were met, then both their adaptation to the new culture and giving up rice were easier.

Immigrants whose children grew up in Hawai‘i were more sensitive to their children’s distance from Filipino culture and heritage. For them, loss of rice was loss of culture.

Once Filipino immigrants changed their rice habits, they could clearly remember their before and after diabetes eating habits. Most found they had to halve their customary daily rice intake. After walking for exercise, one felt justified in eating more rice. Rice was the only food for which immigrants craved, and they wanted to fill up with rice. After being diagnosed with diabetes, they could not eat enough to feel satisfied unlike before when they did not have diabetes. For them, rice was truly a comfort food.

Worry Is a Filipino Pastime

Q: Did anything change in your life when you found out that you had diabetes?
A: Only worried about it.
Uninsured Filipino immigrants had much to worry about even before they were diagnosed with diabetes. Job problems, lack of healthy food, homesickness, worries about family living far away from them, and lack of savings for a rainy day were common. When the diagnosis of diabetes was made, one woman just cried. The worries about diabetes included that it was serious and might get worse. When a blood sugar reading was high, so was worry.

In their explanatory model, Filipino immigrants worried about sudden death, going on insulin, and joint aches. Constant worry caused weakness as well as bad dreams and illness. Those who knew about the seriousness of diabetes felt more stress about an uncertain future. Those who understood the seriousness of diabetes were also more likely to engage in self-management behaviors to reduce worry.

Self-management behaviors to reduce worry included avoiding too much thinking by going out, visiting and talking with friends. Engaging in self-care activities also reduced worry. When Filipino immigrants were successful at taking their medicine, relaxing and eating what was good for them, worry decreased. Watching the diet by avoiding eating too much, too much sweets and too much rice, also reduced worry when these ways of living became ordinary habits for them. Not always thinking “Oh, I’ve got diabetes” was the feeling described when one was maintaining self-management behaviors.

Barriers to self-management behaviors for diet and finances were cause for worry. Difficulties with cutting off eating and not feeling satisfied after eating worried these immigrants. When they were not successful with their diets, they worried about episodes when they ate the wrong food. Failing to engage in self-care was itself a source of worry.
Financial worries were closely related to the impact on the family. No insurance meant no way to pay if something happened and no access to doctors. Complications from diabetes meant possible loss of a job. Without income, an immigrant would create difficulties for their family. Family in Hawai‘i would have to support them, and family in the Philippines would not receive remittances. If an immigrant became disabled, he or she may have to return to the Philippines if no family member, i.e. a first degree relative, was available to take care of them. The lack of insurance had far reaching consequences.

As with so much else in the lives of Filipinos, worry eventually gets back around to being focused on the family. Not being able to be with their family or making it difficult for their family if eventually disabled was the prominent reason for the worry. "I am thinking of my family" was a common reason to worry and a motivation to engage in self-care. Parents expressed wanting to protect children from knowing too much about the risks related to diabetes, but the children seemed to learn about risks on their own and expressed their own worry to their parents.

Advice: A Gift Freely Given and Received

“...even you’re a Filipino, you have to follow everything, what advice for you.”

Unlike the culture of origin of the investigator, Filipinos received advice from family as an expression of caring rather than criticism or interfering. Filipinos advised each other often, and accepted even unsolicited advice from strangers as a gift to be considered. Judgement about the validity of advice was not shared. Advice from doctors and nurses was one form of advice, but clearly not the final word. Any advice received was widely shared among family, friends and co-workers.
Sharing advice was not especially done for verification of its validity. Advice was a way to express concern, and offer encouragement. Family was the usual source of first advice, and family continued to give advice long after the first diagnosis. Advice was remembered and repeated, and advice from another person would be added to the litany. If advice was not followed, the recipient would not reveal that fact unless pressed, and only after the listener had conveyed their opinion about the advice.

This social network for advice was important for reinforcement. When the social network provided during an educational program or treatment program ended, the reduction in number and frequency of advisories made the chance of abandoning self-management behavior change higher. It was as if the relationship with others was key to successful maintenance of behavior change. Peer support rather than peer pressure or competition seemed to be at work here. Those who had continued advice from family members in the household also seemed better able to maintain their behavior change.

Advice could be about what to do, or what not to do. Medical staff were more likely to advise about diet, exercise, and taking medication. Family, friends and other Filipinos gave advice about these elements of self-management as well, but they were more likely to give counsel on avoiding stress, being happy, living a long life, and how to live your life. Advice about what to do included self-management strategies of control and moderation, trying noni and bittermelon, and exercise. Advice about what not to do included eating sweets, soda, too much food, getting fat, creating problems, and pretending to maintain change when you were not.

Advice was sought from God when a decision about what to do was not clear, or during a stressful event. At the close of one interview, when the tape recorder was shut
off one participant said “God is the best physician.” With all of the advice received, it was a great relief to have an external consultant to sort it all out.

The Family Is Everything

“And right now I petition my single daughter – we wait already for ten years… I'm worried because, especially if I don't – I don't have any family members here – so who will take care of me if I become invalid.”

Older Filipino immigrants always let you know how many children and grandchildren they had when introducing themselves. They were grateful for children in Hawai‘i, and worried about children back home in the Philippines. An immigrant with a serious illness would usually consider whether to stay in Hawai‘i or return to the Philippines, depending on how many children resided in which locale. Wherever there were more offspring, that was usually where they would go. Being with the larger contingent allowed them to enjoy more family while spreading the burden of care among the siblings. Adult children in the U.S. were also more likely to be working, and less available to care for elderly parents.

Families were a source of advice, support and motivation for self-care of diabetes. Filipino immigrants with type 2 diabetes reported that having their family was the reason to want to live a long life. Even when doing well with diabetes, worry about finances and the future and sadness about separation from family tinged the happiness they might have enjoyed from their success with self-care. The most distressed were those for whom living out their lives in Hawai‘i was not likely to bring them the satisfaction of being surrounded by family at the end of their lives.
Filipino immigrants without first degree relatives in Hawai‘i stated that they were by themselves or without any family. Having a spouse or in-laws in Hawai‘i was not the same as having family. Petitioning first degree relatives to immigrate to Hawai‘i added to the uncertainty of one’s future. Deciding how long to wait before moving back to the Philippines was an important decision for uninsured immigrants. Go back too soon, and the relative lost the opportunity. Wait too long, and you might have a catastrophic health event and a big bill to pay for your family to pay. Waiting too long might mean you would be too sick to really enjoy the family you returned to see. This uncertain future was added to the list of things to worry about. Mere presence of family reduced that worry, as if one were assured of being cared for by family.

Having Filipino friends who also had diabetes was a secondary source of support. For those who did not have siblings in Hawai‘i, it was as if Filipino friends served as surrogate brothers and sisters. Almost more important than getting support from friends and family was being able to give support and help. Even the most distressed people would say that giving support and help to someone made them feel good.

Another source of advice and comfort for immigrants were things Filipino. If something about diabetes was on the Filipino radio, it had to be the best. If alternative therapies were broadcast on the Filipino cable TV station, Filipinos would try them. If paid advertisements for nutritional supplements ran in the Filipino newspaper, they must be worth trying. Anything popular among Filipinos was talked about by many and tried by many. The results of things tried were reported back to the social network.

Using this feedback was a form of group management rather than self-management. In group management, results from a group of similar people were more
valid than results from an individual, a social capital of sorts. It was possible that Filipinos in Hawai‘i were seen as an extension of one’s own family and therefore more trusted. Trying something recommended by a friend allowed that friend to feel good about helping you. Perhaps nostalgia for things from home provided comfort for immigrants who were in need of things comforting while struggling with diabetes self-care.

In conclusion, the four cultural themes which emerged from the data analysis were related in that family was a source of both worry and advice for Filipino immigrants with type 2 diabetes. Financial worries were also in the context of the family, as income loss and need for care if disabled would impact the family negatively. Rice was a staple in the Filipino diet, a nostalgic reminder of happy times with family during harvest in the Philippines. After being diagnosed with diabetes, rice consumption had to be managed and was difficult to control because of all of its cultural significance.

The conclusions and implications for clinical practice discovered from this ethnographic study are presented in the next chapter.
CHAPTER 6: CONCLUSIONS

Conclusions drawn in this chapter are in four areas. An assessment of uninsured Filipino immigrants as self-managers will be made using the essential elements of self-management presented in Chapter 3. Next a comparison between the cultural group in this study and other cultural groups studied in the qualitative literature from Chapter 2 will be made with a focus on the stages of self-management and barriers to and facilitators of self-management. Recommendations for future research and implications for practice will conclude the chapter.

Pinoy Self-Management

Most of the participants in this study described behavior which illustrated many of the eight essential elements of self-management presented in Chapter 3. Each essential element will be presented below as to how the participants in this study demonstrated these essential elements.

1. *The self-manager has knowledge and skills needed to take medication, test blood sugar, exercise, eat healthfully and manage stress and negative emotions.*

To obtain knowledge and skills to engage in self-management, some participants had attended classes in self-management. All participants attended the Diabetes Clinic where diabetes education and supporting written materials were featured. Although all participants at the Diabetes Clinic were offered a glucometer and test strips to self-monitor blood glucose, several refused the offer. Six of the participants had attended a
chronic disease self-management workshop which addressed all of the knowledge and skill areas.

One of the themes from this ethnography was receiving and offering advice. The participants had great social capital with wide circles of family, friends and coworkers offering advice. Seeking advice was another way they obtained knowledge and skills for self-management, learning from the experience of others. Advice was usually sought from other Filipinos.

2. The self-manager sets realistic and acceptable long range goals.

Most participants set realistic and acceptable long range goals. Most set goals of preventing long-term complications and they were taking action toward that goal through dietary changes, exercise, taking medication and going to medical visits. Some participants gave limits about what they were willing to change. For example, one woman refused to eat foods that were good for her if she didn’t like them, while another woman agreed to walk for exercise but would only walk as part of getting to and from her job.

3. The self-manager has a plan to initiate proper action to achieve goals.

Making plans to initiate proper action to achieve goals was a feature of the Diabetes Clinic and the adult medicine practice at the community health center. These plans were behavior-specific and measurable. Self-management action plans emphasized what the patient wanted to do, or was willing to do. These plans were documented in the medical records and reviewed at each Diabetes Clinic or medical visit.

4. The self-manager evaluates his performance by reviewing evidence and makes adjustments in behavior to make steady progress toward goals.
When participants were not satisfied with their own performance, they were generally willing to make adjustments in their plans. These adjustments were often adopting further lifestyle change or taking additional medication. Most participants had to overcome financial barriers to obtain the evidence to assess their performance when the necessary evidence was a blood test result. This issue will be discussed further below in item 6.

5. The self-manager decides what level of risk he is willing to accept, and sets goals in alignment with that decision.

Setting goals in alignment with acceptable risk was more of a tacit process. Some participants were known to decide to not take higher doses of medicine, while others chose to intensify lifestyle changes when they felt they were taking too much medicine already. All but one of these participants had hemoglobin A1cs in a range higher than the ideal recommended by the American Diabetes Association. With rare exception, the self-evaluation of how participants knew they were doing well with their diabetes was based on how they were feeling rather than their numbers. How participants defined acceptable risk was not made explicit in this study, but they seemed to rely on their providers to tell them when the numbers were unacceptable.

The final three essential elements were the least evident for these uninsured Filipino immigrants. These three elements were the ones most sensitive to the barriers presented in Chapter 4, specifically financial and cultural barriers.

6. The self-manager takes responsibility to consult with his health care team at regular intervals and when needed.
Taking responsibility to consult with the health care team at regular intervals and when needed was difficult. As at most community health centers, a fee was charged to see a physician or nurse practitioner for an office visit. Because the Diabetes Clinic was considered a health education service, there was no fee for this service. Although some services for diabetes care were free to all uninsured patients (immunizations, health education, nutrition, eye exam), lab tests and some medications required payment.

Patients would need to save up money for tests. Providers and patients would negotiate with each other about reducing the frequency of recommended blood tests, and about continuing medication even if tests to monitor for adverse effects of medication had not been done. This reluctance to get blood tests was financially driven. On occasions when a drug company would donate a hemoglobin A1c machine for the day, patients were eager to come in and take advantage of the opportunity. It seemed the act of having a blood test was not the barrier per se for the participants.

Of note was the fact that obtaining fewer than desirable blood tests for monitoring was more of a problem for providers than it was for patients. Several participants mentioned not wanting to do self-monitoring of blood glucose for fear of getting a bad result which would be a cause of worry. The “no news is good news” philosophy seemed to be at work in this element of self-management.


Problems related to financial barriers were most commonly addressed. One participant reported using low cost alternative therapies which were readily available to her through a neighbor. She was able to reduce reliance on Western medicine, thus keeping costs of care down. One participant, when faced with needing laser surgery for
her eyes, went to the Philippines for this service where the cost was considerably less. Coming to a community health center for care allowed participants to enroll in patient assistance programs with the drug companies. For some participants this amounted to several hundred dollars in savings each month.

For some participants there were cultural barriers to self-management where no solution seemed feasible. Going to parties without partaking in Filipino food, particularly sweets, seemed impossible to most participants who often curtailed social activities. Changing the diet to incorporate starches other than white rice was another problem area without an apparent solution. Some participants had tried brown rice but did not like the taste even when mixed with white rice. Worrying about complications was a problem which only one participant address with problem solving, using socializing as a distraction strategy.

Able self-managers may decide that they have a problem which cannot be solved now, but if a problem were identified an able self-manager would intend to solve the problem eventually. For the study participants, some problems seemed to be on the permanently unsolvable list. Advice on these matters from peers who had been successful at solving such problems would likely have been welcome.

8. The self-manager rates his perceived self-efficacy for taking medication, testing blood sugar, exercising, eating healthfully and managing stress and negative emotions, and takes action to increase his self-efficacy.

This area was also related to item 7 above. Participants got stuck in unsolvable problems when they perceived they could not make a change in their behavior. Perceptions included statements like “If I go to a party, I have to eat the food”; “If I have
time I exercise”; and “I can’t poke my finger.” In social learning theory, these statements reflect low self-efficacy to the tasks of following a meal plan, exercising, and self-monitoring of blood glucose. Refraining from eating at a party may have been viewed as impolite.

Managing stress and negative emotions was often accomplished by accepting the situation rather than any behavior change such as relaxation techniques or improved communication. For several participants who had their diabetes for less than five years, stress and negative emotions improved when they could see improvement in their blood pressure and blood sugar resulting from their self-care. Participants who had diabetes for more than five years, especially those who had already suffered complications from diabetes, had lived through times when it was difficult to see progress with their diabetes. Those participants had more worries and negative emotions.

The participants saw themselves in the context of their families here in Hawai‘i and back in the Philippines. Rather than assessing their self-efficacy, they considered their family’s group efficacy when considering behavior change related to diabetes. Advice and support from family members was required in most matters. For the most part, group efficacy was high for the families of the participants with evident support from spouses and children. But worrying about the potential financial impact of diabetes on the family created stress and negative emotions.

A poignant example of lack of group efficacy for reducing stress and negative emotions was one of the grandmothers, the caregiver for her grandchildren. She had left a job which provided medical insurance to assume this role because her adult children needed to work. She found caring for her grandchildren to be stressful and exhausting.
Her previous exercise routine was disrupted. Without health insurance and with no salary, she was unable to pay for lab tests and only had them when pushed to do so by her provider. Her hemoglobin A1c was at 10%, the highest for the study participants. It was possible that the family failed to rally around her because she would not ask for help from her already stressed family. She relied on God to provide relief from worry, and avoided knowing the status of her diabetes control for as long as possible.

In summary, the uninsured Filipino immigrants with type 2 diabetes in this study did well in four of the essential elements of self-management which involved acquiring knowledge related to self-care tasks, setting goals and making and adjusting plans to achieve goals. The study participants relied on their providers to decide about the acceptable level of risk, but because of a lack of insurance they did not consult with their health care team or purchase lab tests to assess their health status as often as clinical guidelines, and their providers would recommend. Problems related to stress and negative emotions were often not analyzed or solved. The group efficacy of the family for self-management tasks often seemed more important than the self-efficacy of the individual, especially in the area of managing stress and negative emotions. Efforts by the participants to increase the group efficacy of the family were not evident.

Comparisons with Findings in Literature Review

In reviewing qualitative studies on diabetes self-management it was apparent that studies done in Caucasian populations focused on what successful self-managers were doing to take care of their diabetes, while studies in other ethnic populations and low-income populations focused on problems and barriers. For this population of uninsured
Filipino immigrants with type 2 diabetes, there were many success stories. All participants with one exception reported little overall distress in their self-management, even if some areas were difficult for them. The only other study with an immigrant group (Yugoslavian women who had migrated to Sweden) (Hjelm et al., 1999) had similar findings to this study, i.e.: the immigrant women were oriented to feelings about migration; they enjoyed life by keeping traditions of their home country even if these were against dietary advice; they were less inclined to self-monitoring of blood glucose than the Swedish women.

Findings in Common with Other Populations

Stages of Self-Management

The participants in this study did not report distinct stages of self-management as were reported in other studies (Hernandez, 1999; Rayman & Ellison, 1998; Sritanyarat, 1996; Wierenga & Hewitt, 1994). However, for several participants there was a clear distinction that making changes was harder at the beginning, but got easier as time went on. In the words of one participant, “It’s an ordinary life” now that she had met with success as a self-manager.

One key change for several participants was that they no longer worried about their diabetes or thought about it all the time. This was reflective of the “management as life” stage in another study of primarily Caucasian women (Ellison & Rayman, 1998), and may also reflect mastery over stress and negative emotions. Accepting necessary sacrifice described this stage in this study. In a study of people with type 2 diabetes in Thailand, participants spoke of making a sacrifice of sticky rice in the final phase of their
self-management process (Sritanyarat, 1996). This sacrifice of cutting off rice was echoed in the Filipino participants in this study. The Thais did not exercise when advised to do so, whereas all the Filipinos reported engaging in regular exercise to take care of their diabetes.

**Barriers to Self-Management**

For middle-aged, low income African-American women who were identified as having a multi-caregiver role, the family was core (Cagle et al., 2002). However, their families did not provide support for self-management tasks as was the case for middle class suburban women who could delegate some support tasks to their family members (Gerstle et al., 2001). For the uninsured Filipino immigrants in this study, families provided financial and emotional support. In the case of one elderly participant, the daughter had taken over self-management tasks for her mother. Families were a barrier to self-management for only one participant who gave up her job with health insurance to be the babysitter of her grandchildren, although she did not present her situation as a barrier.

Work as survival was a barrier for both low income African-American women and the participants of this study. There was no question that participants would work as much as possible, and they could see examples from their own families where people who worked two or more jobs quite literally had no time to take care of their diabetes. Lack of access to behavioral options because of poverty was a barrier for Mexican-Americans (Hunt et al., 1998). Only one participant in this study cited lack of income as a barrier because she preferred swimming as exercise but could not afford a membership
at a health club suitable for her work schedule. Hunger was a barrier to following a meal plan in another study (Hall et al., 2003), and for five participants in this study who reported feeling shaky and dizzy when they were hungry. Beyond psychological hunger, these Filipinos felt physical symptoms which may have been related to low blood sugar.

Three additional barriers from three different studies were shared by the participants in this study. These barriers related to managing negative emotions. Hong Kong Chinese did not engage in SMBG because of the anticipatory anxiety about a possible high blood glucose level (Shiu & Wong, 2002). Participants in this study also did not want to get bad news, even when they were wondering about whether their symptoms were related to high or low blood glucose. People in northwest England age 50 and older admitted to not asking too many questions of their health care professionals because of fear of knowing too much about their condition (Pooley et al., 2001). Some participants in this study were also afraid of getting bad news from SMBG and preferred to remain in the dark.

Adults with type 2 diabetes in rural Illinois felt inadequate communication from their physician about the seriousness of their condition was a barrier to self-management (Dietrich, 1996). The participants in this study also related that diabetes was not considered a serious disease in the Philippines, and they only learned about its seriousness when they came to Hawai‘i. Lack of continuity with one provider was a problem for people in a general practice in England (Pooley et al., 2001). While some participants in this study longed for a personal doctor, they also had positive relationships with the staff at the CHC as a whole and saw advantages to having a team of providers instead of one physician. For urban aboriginal people in Manitoba, unhelpful interactions
with health care providers were a barrier to self-management (Gregory et al., 1999). The participants in this study who had experience with private physicians before coming to the CHC also complained of a lack of information and encounters where they were just told to take pills with no explanation.

Facilitators on Self-Management

Respondents to surveys who were in the third success stage of self-management had a health orientation rather than a problem orientation toward their diabetes (Wierenga & Hewitt, 1994). This was clearly the orientation for participants in this study. They wanted to be healthy and feel good more than they wanted to reach a particular HgbA1c target. Age, experience, family, community, tradition and trust all explained health actions for Caribbean African-Americans in Miami (Parry et al., 1996). These same holistic factors came through for participants in this study.

Reasons and outcomes for attending diabetes education classes were similar for people in Ontario (Stamler, Cole & Patrick, 2001) and the participants in this study: knowledge, preparation, control, support, and socialization. Personal characteristics influenced the learning process for exemplars of self-management (Rayman & Ellison, 1998). Differences in learning style and self-management strategies were evident for participants in this study during educational sessions and individual sessions to facilitate self-management.

At the individual level, both motivation to prevent complications (Maillet, 1996) and the development of complications (Dietrich, 1996) were facilitators of self-management for African-American women, adults in rural Illinois, and the participants in
this study. Spiritual beliefs facilitated management of negative emotions for low-income African-American women (Egede & Bonadonna, 2003), and this was mentioned by one participant in this study as her strategy for dealing with worry, stating “God is the best physician.” For low-income African-American women in multi-caregiver roles, self-identity was based on relationships with others and the welfare of the community (Cagle et al., 2002). For the women participants in this study, self-identity was based on relationships with family and, to a lesser extent, solidarity with other Filipinos rather than a community per se. Solidarity was evident in health and self-management education programs for Filipinos conducted by Filipino staff at the CHC.

For suburban women in New York, diabetes management tasks were assumed by other family members (Gerstle et al., 2001) and this was evident for a few participants who were transported and accompanied to medical visits by family even when the availability of an interpreter did not require them to attend the visit. For middle class African-American women, families were supportive as well (Maillet, Melkus & Spollet, 1996). For participants in this study, family support came through at the time of diagnosis and for help with paying for medical expenses.

In the area of relationships with health professionals, building effective doctor-patient relationships and being able to discuss treatment matters with their doctor facilitated self-management for patients seeing an endocrinologist for the first time (vanDulmen & Bilo, 1997). In a study of exemplars of diabetes self-management the participants described coming to a health care organization with a culture of caring was a turning point for them and their diabetes self-management (Rayman & Ellison, 1998). Those exemplars also described a shift in the role of their provider from being less of a
director to more of a facilitator as they went through the stages on self-management. For participants in this study, coming to a CHC where they could learn not only what to do for self-care but why was empowering and facilitated further changes in diet and exercise behaviors.

In the area of managing negative emotions, a study with post-menopausal Caucasian women in good glycemic control found that striving for satisfaction, reconciling emotions, and developing a new cadence in life were facilitators of self-management (Whittemore et al., 2002). Avoidance was a commonly used strategy by these same women in dealing with food. For patients seeing general practitioners in northwest England, acknowledging the variability of each patient’s experience living with diabetes was a key concept for effective management for both patients and practitioners (Pooley et al., 2001). For the participants in this study, being satisfied with their own efforts and with their food intake was important to feeling good. Several participants reported resolution of their hyperglycemia symptoms, which gave them energy akin to a new cadence in life. Avoidance of certain foods and parties with tempting foods was a common strategy as well. One participant who expressed the most emotional distress sought to reconcile her feelings by seeking psychiatric help for recurring depression. Another participant identified that some people he knew with diabetes were just pretending to take care of themselves by avoiding drinking, one variety of an individual’s experience of living with diabetes.

In summary these participants had barriers to self-management similar to other populations in qualitative studies done since 1995. Thais also felt that giving up rice was a sacrifice (Sritanyarat, 1996). Hong Kong Chinese were in denial about hyperglycemia.
and did not do self-monitoring of blood glucose when indicated (Shiu et al., 2003; Shiu & Wong, 2002). Low income African-Americans also viewed their jobs as a means of survival (Cagle et al., 2002). Being somewhat in denial and not wanting to know too much about their diabetes was held in common with people in northwest England (Pooley et al., 2001). Preventing complications and developing complications were motivators for self-management for these participants and for adults in rural Illinois (Dietrich, 1996) and African-American women (Maillet, Melkus, & Spollet, 1996). Some participants felt they were not informed of the seriousness of diabetes at their time of diagnosis, especially if diagnosed in the Philippines; this was also true for rural adults in Illinois (Dietrich, 1996).

These participants had three facilitators of self-management in common with other groups. Striving for satisfaction, developing a new cadence in life and using avoidance as a strategy were facilitators shared with post-menopausal Caucasian women (Whittemore, 2002). Support from families was also received by suburban women in New York (Gerstle et al., 2001).

Findings Not in Common with Other Populations

Stages of Self-Management

The distinct middle stage of self-management, variously called trial and error, regulation or management as work in different studies, was missing in the experience of the Filipino immigrants. It was possible that the first phase of survival, management as rules or learning about diabetes was truncated. These participants did not report following strict meal plans, but rather adopted general advice to meet their own routine
and then made adjustments. They moved swiftly from learning the rules to adapting the rules to fit their own situations.

**Barriers of Self-Management**

There were two barriers identified by Hong Kong Chinese that were similar to what Filipino immigrants experienced, but not the same. For Chinese, SMBG was not performed to avoid a sense of failure from an undesirable reading (Shiu & Wong, 2002). Distancing was a major coping method for them, which meant they kept their diabetes a secret from others because of the stigma that a sick person uses up too many resources. For participants in this study, SMBG was not performed to avoid worry as well as the financial burden of the test strips. Distancing as a coping method pertained more to social situations where difficult food choices were likely to be a problem rather than denying their diabetes to others.

**Facilitators of Self-Management**

For post-menopausal Caucasian women, composing a structure to life was important (Whittemore et al., 2002). For Caucasian men and women, successful management required a high level of cognition and thinking through how diet, exercise and medication relate to blood sugar levels (Sullivan & Joseph, 1998). For the participants in this study, incremental rather than sweeping change was evident. The sum of all the changes was conceptually an integration rather than a structure. These Filipinos tended to stick with simple changes in diet, and did not do self-monitoring to be able to
fine tune diet and exercise to achieve a desired range of values throughout the day. Moderation was their most commonly used strategy for self-management.

Certain views about change were facilitators for in three studies with Caucasian participants. A willingness to change was important for men and women (Sullivan & Joseph, 1998). Change in home and family routines to support the mother of the house was important for suburban middle class women (Gerstle et al., 2001). The perception that the diagnosis of diabetes was a turning point for change to take care of oneself was seen in men in Australia, for whom women were doing the food decisions (Koch & Kralick, 2001). Perhaps because of their naturalistic model of health, the participants in this study did not view proper diet and adequate exercise and big changes in their lives. An approach of gradual change in habits and lifestyle for many participants may have mitigated the feeling that things had changed much. Following the advice of family, friends and doctors was the description used, rather than change.

Communication issues in diabetes self-management were raised in studies with Caucasians. These communications issues were considered important to facilitate self-management, and included the need to feel heard and the opportunity to ask questions (Pooley, 2001). Patients seeing an endocrinologist for the first time were most satisfied when these issues were brought out in the third visit after building a relationship with the doctor and discussing treatment matters (vanDulmen & Bilo, 1997). For the participants in this study, communication with the doctor was viewed as a one-way street where the doctor was supposed to tell the patient what was important for her to know. These participants might have been reluctant to bring up psychosocial issues with their doctor,
and might prefer to keep these issues within the family. Out of respect to the doctor they would have responded to questions, but at the same time would minimize their problems.

Two final issues in studies with Caucasians were autonomy and quality of life. One reason for taking diabetes education classes was to improve their quality of life (Stamler, Cole & Patrick, 2001). Respondents to a survey whose activities were more in the success phase of self-management demonstrated more autonomy than those at other levels (Wierenga & Hewitt, 1994). Participants in this study took diabetes education to have the knowledge to care for themselves so they could have their families longer, be of service to others and help their families. Relationships with others, rather than autonomy, brought success in life and in diabetes self-management. Participants in this study were more likely to share what they had learned about diabetes in a reciprocal getting and giving of advice with fellow Filipinos with diabetes. The Filipino style of self-management emphasized the importance of the group over the importance of the individual.

Findings Unique to Uninsured Filipino Population

Families could have a dual role of supporter and deterrent (especially dietary deterrent) for African-American women (Maillet, Melkus & Spollet, 1996), but low income African-American women felt they got support only from their friends at church and not from their families (Cagle et al., 2002). This was not the case for the participants in this study. They expected that their family members would watch over them, and found the attention from their families helpful to keeping them on track. In his book Diabetes Burnout Polonsky devotes a full chapter of advice on how to get the diabetes
police (usually family members) off your back (Polonsky, 2000). The participants in this study would likely find that idea ludicrous.

The importance of advice from fellow Filipinos has been reported in a large national survey of Asian Americans done in 2001 (Collins et al., 2002). Filipinos more than any other Asian-American group in that survey were more likely to seek advice from family and friends than from health professionals. Advice for the participants in this study included coming to a CHC because of the assistance offered in obtaining free medications and clinic visits. "Come to Pajama" was advice given by these participants to their family and co-workers. The CHC had conducted projects targeting Filipinos. The special media awareness campaign for diabetes and outreach efforts in breast and cervical cancer screening helped to spread the reputation of the CHC as a place welcoming to Filipinos. Relationships with Filipino staff kept patients coming back for continuing care, often bringing family and friends in for medical visits.

Participants did not mention sending remittances to the Philippines, although several CHC staff told me that they were sending money to family and buying many gifts for family on regular return visits to the Philippines. Yugoslavian immigrants were oriented to feelings about migration (Hjelm et al., 1999) as were the participants in this study. This lack of mention by participants about remittances was surprising to the investigator, but was understandable. In her role as nurse practitioner at the CHC, the investigator was often negotiating with patients to save up money to buy lab tests. If patients felt well, they did not want to make this purchase. To admit they were sending money to the Philippines instead of purchasing recommended blood test would be rejecting the investigator’s advice and likely to be avoided. If the semi-structured
interviews had been conducted by a Filipino, more information about remittances and participants' views of them might have surfaced.

Worrying about how to pay for future hospitalizations or complications was a major source of stress for these uninsured Filipino immigrants. Their families would suffer because of loss of income and potential loss of the ability to petition other family members because of lost income. A weak link in the complex context of family extending from Hawai`i to the Philippines would have a big ripple effect across the Pacific. Considering the reasonably good health status of these participants, the amount of worry seemed great but understandable because the worry involved many people.

Among those with type 2 diabetes studied with qualitative approaches, the Yugoslavian immigrants in Sweden (Hjelm et al., 1999) and indigent folks (Tu & Morrison, 1996) did not express the same financial worries as this group of uninsured Filipino immigrants. This finding may be related to the lack of an available public hospital for these participants, or the lack of publicly funded health care in the U.S. for recent immigrants and working poor.

Recommendations for Future Research

Further analysis of quantitative data from this study could be conducted, looking for associations between the number and types of self-management strategies employed by participants with their behavior change, glycemic control, and their emotional distress from diabetes. A preliminary assessment showed that the participants who mentioned only one self-management strategy seemed less able to make behavioral change compared to those who used multiple strategies. Positive or negative correlation could
inform curriculum development of future culturally tailored self-management education for Filipinos.

Calculation of risk profiles for developing complications could also be done to look for correlation between which complications participants worried about and what their actual calculated risks were. Findings from this study suggest that participants were more worried about microvascular complications when their calculated risks were higher for macrovascular complications. Software to calculate individual profiles of risks of developing complications are readily available. Knowledge gained could inform providers about the need to assess the patient’s understanding of their risk to correct misunderstandings.

Better understanding of worry and how uninsured Filipino immigrants deal with worry would be a good question for a focus group. This focus group should be facilitated by Filipino staff, and should explore perceptions about what happens if an uninsured person is hospitalized. In their recent study on the unintended consequences of federal regulation and hospital policies which leave patients in debt, researchers at the Heller School at Brandeis University found that federal fraud and abuse laws and Medicare regulations have inadvertently inhibited providers from offering free or reduced-cost care to uninsured (Pryor et al., 2003). They also found that hospitals surveyed did not have formalized procedures for negotiating discounts for low-income patients ineligible for public insurance programs. Knowledge gained from such a study could inform future self-management education programs on how to do tailoring for this immigrant group for whom worry is so pervasive. Likewise, policy makers could be informed about the need for clearer guidelines on billing and debt collection and reduced-cost care policies.
Research to norm tools for measuring self-management in this population is needed to be able to study the effects of future self-management education interventions. There are several tools available to measure self-management, but most have been tested only for Caucasian populations. There were different concepts describing facilitators of self-management for Caucasians, i.e./autonomy, quality of life and change, that did not come up in this study of uninsured Filipino immigrants. A review of the items in those tools against the findings from this study could guide the choice of the best tool for this population.

Because of the pervasive worry for this group, a reliable tool to measure the effects of worry is needed. The mastery of stress instrument used in a Canadian study had positive correlation with the qualitative findings pre-, during and post-education (Stamler, Cole & Patrick, 2001). This tool should be considered for review and testing. Good self-managers need to be able to manage stress and negative emotions. Good researchers need a valid and reliable way to measure if this is happening. Better interventions to facilitate the management of stress and negative emotions need to be developed for Filipinos in particular.

Implications for Practice

_Caring for the Individual within a Family Context_

Participants in this study received much support from their families. Including family members in medical visits to learn about what behaviors to reinforce and encourage would be helpful. A focus on good health promotion activities at medical visits would be in keeping with the naturalistic health model held by these participants.
Patients could be asked which family members are most likely to look out for them and advise them. Since young adult children of middle aged Filipinos are likely working more than one job, flexibility with appointment times is needed. In the investigator’s experience, late afternoon appointments between the day job and the night job, or Saturday morning appointments work best.

The cultural significance of rice for Filipinos means that attempts to decrease consumption of white rice would be difficult. Most of the participants in this study were able to cut back on their portions of rice, but still ate rice twice a day. This was usually one of the last changes they made to improve glycemic control. Some were able to mix brown rice in with their white rice to reduce the glycemic index. Providers need to tread softly when suggesting changes in rice consumption to avoid losing the patient, and should seek nutritional support services for their patients.

Anxiety and depression have long been known to have a negative impact on glycemic control for people with diabetes. Because Filipinos are less likely to complain and more likely to keep family problems within the family, providers need to be willing to ask about these issues and use the best available assessment tools. When facilitating SM for this population, emphasis should be placed on the essential elements of SM which were most difficult for this population, i.e. medical consultation when necessary, problem solving, and increasing self-efficacy. Assistance from a cultural interpreter would be helpful. Worry may be a manifestation of anxiety and may benefit from treatment.

Finances for uninsured Filipino immigrants involve not only the patient but the entire family. Since 1996 when federal welfare reform excluded recent immigrants from

211
enrolling in Medicaid, different states have had different responses to the problem of 
funding care for recent immigrants living in poverty. The patient assistance programs 
from the drug companies are administratively difficult but necessary if a provider is to 
effectively care for patients. A recent privately funded initiative in Hawai’i provides 
CHC staff to assist with applications to drug companies for patient assistance programs. 
This program is open to all people who lack prescription drug insurance and is essential 
for low income people with diabetes to ensure a steady supply of diabetes medications.

_Caring for the Population_

Filipinos are likely to follow advice from fellow Filipinos. In social learning 
theory, seeking advice from persons like oneself increases self-efficacy by role modeling 
and vicarious experience. Participants in this study reported that diabetes is not 
considered serious in the Philippines. A public health approach and community education 
are needed to provide evidence-based information from Filipino presenters, the most 
credible source for his population. Because of the prevalence of diabetes among 
Filipinos, routine and free diabetes screening for new immigrants should be available in 
every community with large numbers of Filipino immigrants. Although blood pressure 
measurement was routinely available in public health facilities in the Philippines (even in 
the provinces), routine screening for diabetes and cholesterol had not been available to 
these immigrants. Private-public partnerships between CHCs and pharmaceutical 
companies across the country have been successful in screening uninsured immigrants at 
health fairs and special clinics. Availability of these services needs to be advertised more
frequently to immigrant groups through ethnic newspapers, radio shows, churches and community events.

Providers can ask patients about the advice they are getting from friends and family in a non-judgmental way at routine medical visits. Any misinformation can be addressed. Working with interpreters who are able to establish relationships with patients would ensure a more complete psychosocial history. A team approach when working with people with diabetes improves outcomes and shares the burden with the primary care provider when different team members can provide education on nutrition and exercise.

**Advocacy**

There are many levels at which individual nurses and the nursing profession could advocate for uninsured Filipino immigrants with type 2 diabetes. Ensuring the availability of in-language educational materials and bilingual staff should happen in any practice with a large proportion of Filipino immigrants would help the patients and their families who are offering support. Medicare regulation currently leads hospitals to send bad debt to collection agencies for all patients regardless of ability to pay. Clarification or modification of these regulations would reduce the chances of impossible debt when uninsured immigrants need to go to the hospital for emergency care.

Working with private foundations for innovative solutions to the problem of paying for indigent non-emergency care has been demonstrated in several states. Private labs may be willing to donate routine tests for a population of uninsured low-income immigrants. In states with a high percentage of foreign-born citizens, working with state
legislators for funding for health care services for recent immigrants may be possible. Partnerships between nursing groups interested in diabetes and Filipino community groups is a way of getting the message about diabetes self-management out to a wider audience to increase awareness in the community. Just as the participants in this study made incremental changes toward their goals, advocates in like manner need to keep building on each gain.

Overall the participants exhibited good skills as self-managers. Their experience at the diabetes clinic included self-management education which used an empowerment approach with collaborative goal setting. This experience may have been unusual compared to the experience of most uninsured Filipino immigrants, but the findings from this study show that participants were able to use self-management education and apply it in their lives. The care at the CHC included intensive patient assistance programs with the drug companies to obtain free medicine, and yet there were still financial barriers for obtaining lab tests and routine services. Financial barriers must only be greater for those seeking care in non-CHC settings. Dropping out of care may be the only option for many uninsured Filipino immigrants. Continuation and expansion of free services which allow them to consult with their health care team, analyze and solve problems and engage in activities to increase group efficacy are warranted.
Table 1. Eastern and Western Values

<table>
<thead>
<tr>
<th>Oriental or Eastern values</th>
<th>Occidental or Western values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony with Nature</td>
<td>Mastery of nature</td>
</tr>
<tr>
<td>Tradition</td>
<td>Change</td>
</tr>
<tr>
<td>Hierarchy</td>
<td>Mobility (upward/downward)</td>
</tr>
<tr>
<td>Formality</td>
<td>Informality</td>
</tr>
<tr>
<td>Indirectness and subtlety</td>
<td>Directness and openness</td>
</tr>
<tr>
<td>Stoicism, suppression of emotional expression</td>
<td>Open display of emotions</td>
</tr>
<tr>
<td>Age/wisdom and virtue</td>
<td>Youth/physical vigor</td>
</tr>
<tr>
<td>Mutual consideration and self-deprecation</td>
<td>Assertiveness and self-determination</td>
</tr>
<tr>
<td>Modesty</td>
<td>Self-confidence</td>
</tr>
<tr>
<td>Family/group orientation and interdependence</td>
<td>Individualism and independence</td>
</tr>
<tr>
<td>Extended family</td>
<td>Nuclear family</td>
</tr>
<tr>
<td>Convergent thinking</td>
<td>Divergent thinking</td>
</tr>
<tr>
<td>Cyclical concept of time</td>
<td>Specific point, schedules, clocks</td>
</tr>
<tr>
<td>Past and present orientation</td>
<td>Future orientation</td>
</tr>
<tr>
<td>Rote learning</td>
<td>Discovery learning</td>
</tr>
<tr>
<td>Conformity</td>
<td>Competition</td>
</tr>
</tbody>
</table>

Table 2. Matrix of Qualitative Studies Related to Self-Management of Type 2 Diabetes (1994 to March, 2003)

<table>
<thead>
<tr>
<th>Author</th>
<th>Study Purpose</th>
<th>Participants/Setting</th>
<th>Method/Data</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egede &amp; Bonadonna (2003)</td>
<td>Explore the concept of fatalism in relation to type 2 diabetes self-management</td>
<td>39 African Americans 24 men and 15 women Low income patients at an adult primary care clinic at a large medical center in the southeast U.S. mean age = 48 mean years with DM = 13</td>
<td>7 focus groups with all men or all women with a pre-tested interview guide</td>
<td>4 dimensions of fatalism were the meaning of diabetes, the illness experience, the individual's coping response and individual's spiritual beliefs. Fatalism was associated with diabetes self-management</td>
</tr>
<tr>
<td>Hall et al (2003)</td>
<td>Describe how individuals with type 2 diabetes overcame obstacles that interfered with maintaining behavior changes in diet, exercise, and SMBG (self-monitoring of blood glucose)</td>
<td>5 individuals selected from a previous survey of 200 people who were engaging in behavior change for at least one year, and had maintained behaviors without lapse beyond an initial 6 month period.</td>
<td>Case studies with in-depth structured and unstructured interviews</td>
<td>Obstacles to diet plan: hunger, planned and unplanned meal events; and the desire for new foods. Obstacles to exercise and SMBG: physical illness and unexpected life events</td>
</tr>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Shiu et al</td>
<td>Describe perceptions of social stigma and how these influence diabetes self-management</td>
<td>15 Hong Kong Chinese with type 1 and 2 diabetes on insulin with high fear of hypoglycemia</td>
<td>Content analysis of semi-structured interviews</td>
<td>Social stigma was perceived and this interfered with monitoring of blood glucose and injection of insulin when patients were not at home</td>
</tr>
<tr>
<td>Cagle et al</td>
<td>Explore the perceptions of work and the multicaregiver role</td>
<td>12 African-American women age 35 to 55 who were patients at a family practice clinic in the urban southeast Low income 50% separated or divorced</td>
<td>3 evening focus groups</td>
<td>Four themes: family as core; work as survival; impaired role function; inner strengthening. Self-identity based on relationships with others and the welfare of her community.</td>
</tr>
<tr>
<td>Shiu &amp; Wong</td>
<td>Explore the perceptions and experience of Hong Kong Chinese insulin-treated clients who demonstrated fear of hypoglycemia and worry about diabetes complications</td>
<td>13 patients on insulin 5 with type 2 diabetes and 8 with type 1 diabetes; 3 with complications and 3 with poor glycemic control age 22 to 56</td>
<td>Semi-structured interviews examining factors contributing to fears and worries and coping mechanisms</td>
<td>Participants verbalized that optimal glycemic control was the only indicator of good self-management and this was difficult to achieve. 7 tended to run high blood glucose during school and work to avoid hypoglycemia. 10 described psychological burden which involved anticipatory anxiety as well as a sense of failure with undesirable readings. Distancing was the main coping method.</td>
</tr>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Whittemore et al (2002)</td>
<td>Describe the experience of integrating type 2 diabetes treatment recommendations into an existing life style while participating in a nurse-coaching intervention</td>
<td>9 post-menopausal Caucasian women with type 2 diabetes in good control DM for less than 2 years with previous diabetes education and no comorbidities Mean age = 62; 7 married, 6 retired mean BMI = 33</td>
<td>Interview at the end of the nurse-coaching intervention of four 45 minute individualized sessions every two weeks</td>
<td>Challenges to integrating lifestyle changes included reconciling emotions, composing a structure, striving for satisfaction, and developing a new cadence to life. Avoidance was the most commonly used self-management strategy for diet.</td>
</tr>
<tr>
<td>Gerstle et al (2001)</td>
<td>Describe how families adapt to type 2 diabetes management after nutrition education</td>
<td>Middle class families of 5 New York suburban women with 8 to 13 adult family members, 3 Italian-American, 1 Irish-American, 1 African-American</td>
<td>2.5 year ethnography including field observations of families at home and at social events</td>
<td>Women with improved glycemic control had changed home and family routines. Diabetes management was observed as certain tasks: food tasks, patient care tasks, management tasks and medical advice tasks. Family members other than the women with diabetes took on these tasks.</td>
</tr>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Koch &amp; Kralick</td>
<td>Develop and implement an action research program focused on understanding the experiences of living with chronic illness</td>
<td>Two type 2 diabetes groups: 8 older working class women (mean age = 68) and 5 men from mixed social classes and cultural backgrounds age 42 to 78 Community setting in South Australia</td>
<td>Participatory action research using a collaborative inquiry approach</td>
<td>For women: depression and fatigue ruled their lives; preoccupation with buying, preparing and eating food; diabetes was a major intrusion. For men: wanted more knowledge about diabetes; was a positive turning point motivating them to take care of themselves but with the help of women in their lives doing daily food decisions.</td>
</tr>
<tr>
<td>Pooley et al</td>
<td>Explore issues perceived as central to effective management of diabetes, primarily within a primary care setting.</td>
<td>47 people over 50 years old with type 2 diabetes and 38 health professionals from general practices in northwest England</td>
<td>85 semi-structured interviews</td>
<td>5 key concepts identified: need for sufficient time during visits; continuity of care with one clinician; opportunity to ask questions; need to feel heard; variability of each individual's experience living with diabetes. People with diabetes admit to fear of knowing too much about their condition.</td>
</tr>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Stamler et al</td>
<td>Examine perceptions of patient education by persons with diabetes</td>
<td>Convenience sample of 14 adults taking diabetes education classes in Ontario, mean age = 55. Mostly married, mostly first time diabetes education, 3 were insulin-dependent</td>
<td>Interviews during and post-education</td>
<td>Responses in four categories for reasons for attending classes: information and knowledge; control; quality of life; support. Post-education categories: information and preparation; control; socialization; significant others. Positive correlation with qualitative findings and scores on MSI (mastery of stress instrument)</td>
</tr>
<tr>
<td>Hernandez et al</td>
<td>Investigate the experience of type 2 diabetes mellitus in First Nations adults</td>
<td>N = 10 adults living in one reserve community in southwestern Ontario</td>
<td>Interviews on 2 occasions by a First Nations nurse</td>
<td>Three phase process of integration of diabetes similar to findings with Whites with type 1 diabetes, but with different characteristics of the phases.</td>
</tr>
<tr>
<td>Hjelm et al</td>
<td>Explore beliefs about health and illness among migrant Yugoslavian and Swedish people with diabetes that might affect their self-reported self-care practices and care seeking behaviors</td>
<td>15 Swedish and 13 Yugoslavian women with known diabetes recruited from primary health care centers in southern Sweden</td>
<td>Focus group interviews with scenarios of common problems presented</td>
<td>Yugoslavians were oriented to feelings about migration, enjoyed life by retaining former traditions even if against dietary advice, were confident in their traditions and were less inclined toward self-monitoring. Swedes expressed themselves in terms of a healthy lifestyle, were active in self-care, and more frequently used alternative medicine.</td>
</tr>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hunt et al (1998)</td>
<td>Contrast the patient and practitioner perspectives in type 2 diabetes management</td>
<td>51 Mexican-Americans with diabetes type 2 for &gt; 1 year with no complications. 35 practitioners with direct care responsibilities at public clinics and community health centers in San Antonio and Laredo, Texas</td>
<td>Semi-structured interviews</td>
<td>Providers saw failed treatment as lack of information and motivation. Patients lacked full access to behavioral options due to poverty and limited social power.</td>
</tr>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Rayman & Ellison (1998) | Describe women's perspectives of provider and setting factors that support their ability to be effective self-managers of type 2 diabetes | N = 17 women nominated as exemplars in self-management by providers at the diabetes treatment and research center in the Midwest where the women went for diabetes education | 4 structured focus group sessions, investigator field notes, clinic records                  | 4 themes:  
1. Turning points facilitated the management  
2. Organizational culture of caring facilitated self-management  
3. Major shifts in provider-patient relationships accompanied the phases of learning management  
4. A set of personal characteristics most likely influenced the learning process |
| Sullivan & Joseph (1998) | To gain an in-depth understanding of the client's response to lifestyle change expectations. | 10 clients with diabetes type 2 for at least one year, 5 men and 5 women, 9 Caucasian | Taped telephone interview with each participant and single focus group with all; 6 same structured questions for focus group and interview | Successful management required high level of cognition, willingness to change, and thinking through and understanding how diet, exercise and medication relate to blood sugar levels. |
| vanDulmen et al (1997) | Describe doctor-patient communication during outpatient consultations in NIDDM | N = 18 newly referred patients with poorly controlled NIDDM | 54 videotapes of the patients' first three visits with their medical specialist | Most important agenda for each consultation for patient satisfaction  
1st = building effective doctor-patient relationship  
2nd = discussing treatment matters  
3rd = psychosocial issues |
<table>
<thead>
<tr>
<th>Author</th>
<th>Study Purpose</th>
<th>Participants/Setting</th>
<th>Method/Data</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>----------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Maillet et al</td>
<td>Characterize the health care beliefs, self-care practices,</td>
<td>N = 1 focus group</td>
<td>Focus group</td>
<td>Major themes: 1. Motivation to prevent complications 2. Unrealistic weight goals set by providers 3. Multiple barriers to diet and exercise 4. Dual role of family as a supporter and deterrent to diabetes management (especially diet). Culturally sensitive and appropriate patient educational programs must be provided for minority groups.</td>
</tr>
<tr>
<td>(1996)</td>
<td>diabetes education needs, weight loss issues, and facilitators and barriers to diabetes health care in black women with NIDDM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sritanyarat</td>
<td>Develop a substantive theory about the self-care phenomenon of adults with diabetes</td>
<td>Theoretical sampling of 32 Thai adults with diabetes recruited from clinics at 5 hospitals in northeast Thailand</td>
<td>Grounded theory approach</td>
<td>Self-care management is a process of how the disease is perceived, managed and lived with comprised of four interactive processes: learning about diabetes, trial and error, sacrifice, and going on with life. Participants gave up sticky rice for plain rice, and did not exercise when advised to do so.</td>
</tr>
<tr>
<td>(1996)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>Study Purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tu &amp; Morrison (1996)</td>
<td>Investigate the diabetes self-care practices of the indigent</td>
<td>not included in abstract</td>
<td>not included in abstract</td>
<td>Deficit in self-care knowledge was a more serious barrier to regimen adherence and diabetes control than was lack of financial resources for medical care and supplies</td>
</tr>
<tr>
<td>Bess (1995)</td>
<td>Describe the self-care abilities and limitations of NIDDM outpatients</td>
<td>14 female and 8 male NIDDM mostly white, sighted outpatients age 45 to 65 and diagnosed for at least one year</td>
<td>Content analysis of transcribed audiotaped interviews and calculating category frequency counts and correlations</td>
<td>General lack of knowledge was evident and affected the ability to apply self-care skills. Incomes below the poverty level had negative impact on self-care practice integration.</td>
</tr>
<tr>
<td>Wierenga &amp; Hewitt (1994)</td>
<td>Enhance sensitivity to and understanding of the perceptions of persons with diabetes by analyzing these individuals’ unsolicited comments on structured questionnaires</td>
<td>20 of 66 adults with NIDDM who had participated in a previous study to modify eating habits</td>
<td>Systematic analysis of 122 unsolicited comments on 3 different questionnaires</td>
<td>Tri-level schema: Survival, regulation, success. Respondents whose activities were in the success level demonstrated more autonomy than those in the other levels, and had a health orientation rather than a problem orientation.</td>
</tr>
</tbody>
</table>
### Table 3. Studies of Filipinos related to health and immigration

<table>
<thead>
<tr>
<th>Author</th>
<th>Study purpose</th>
<th>Participants/Setting</th>
<th>Method/Data</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown &amp; James (2000)</td>
<td>Evaluate the relationship between measures of Americanization and measures of physiological stress</td>
<td>11 RNs and 21 nurses aides employed full-time at Hilo Medical Center or Hilo Life Care Center</td>
<td>Quantitative: norepinephrine levels, blood pressure, job strain measures</td>
<td>Immigrants living longer in U.S. had elevated norepi levels at home and work, higher diastolic BP, and lower dips in BP during sleep. Job strain unrelated to any measures.</td>
</tr>
<tr>
<td>Heinonen (2000)</td>
<td>Evaluate the role and experience of volunteer community health workers</td>
<td>Visayan-speaking Barangay Health Workers (volunteer community health workers) from 2 regions</td>
<td>Focus groups of 5 to 9 workers using semi-structured interviews</td>
<td>4 thematic categories: Roles and tasks; management responsibilities at work and home; motivation; perceived benefit. Benefits were personal satisfaction and free medical care for compensation. Volunteering became secondary when family finances took priority.</td>
</tr>
<tr>
<td>Valencia-Go (1999)</td>
<td>To discover the impact of widowhood on later life events such as immigration</td>
<td>14 elderly Filipino widows who had immigrated to U.S.</td>
<td>Grounded theory approach with in-depth interviews</td>
<td>Participants viewed themselves as determined, resourceful, intelligent and independent; valued widowhood as a positive experience.</td>
</tr>
<tr>
<td>Berg (1999)</td>
<td>To describe the dimensions of the perimenopausal transition</td>
<td>Convenience sample of 165 English speaking Filipino-American women age 35 to 56</td>
<td>Quantitative: 7 scales including 5 health scales CES-D, and an acculturation scale</td>
<td>Calcium intake was low. 24.8% depression rate. Low prevalence of health problems.</td>
</tr>
<tr>
<td>Berke et al (1999)</td>
<td>To discover predictors of life satisfaction</td>
<td>200 professional and managerial women in the fashion and cosmetic industries in greater Manila</td>
<td>Quantitative: 10 scales administered in English</td>
<td>Work and work outcomes were strongly related to life satisfaction.</td>
</tr>
<tr>
<td>Nikura (1999)</td>
<td>Are modes of expression similar among Asian groups?</td>
<td>Japanese, Malaysian and Filipino white collar workers</td>
<td>Quantitative: 33 item researcher-developed questionnaire tested in 300 Japanese university students</td>
<td>Modes of expression were similar among groups. Japanese lack of directness was difficult for Malaysian and Filipino respondents.</td>
</tr>
<tr>
<td>Author</td>
<td>Study purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ticao &amp; Aboud (1998)</td>
<td>Do solutions to feeding problems when Filipino mothers are paired with a mutual friend vs. a unilateral friend?</td>
<td>Filipino mothers of young children</td>
<td>Intervention study: mothers presented with feeding problem engaged in dyadic discussion</td>
<td>Quality and quantity of solutions increased after the dyadic discussions. A peer-help, dyadic problem solving approach using friends facilitated better solutions to child feeding problems</td>
</tr>
<tr>
<td>Abenoja (1997)</td>
<td>What factors influence life satisfaction?</td>
<td>100 Cebuano-speaking Filipinos age 60 and older in 1991 on Oahu</td>
<td>Survey and field research techniques and QOL tool</td>
<td>Life satisfaction related to good health status, reuniting with their families, how much they have accomplished compared to compatriots in PI, and how they are evaluated by compatriots.</td>
</tr>
<tr>
<td>DiPasquale-Davis &amp; Hopkins (1997)</td>
<td>How does culture affect health?</td>
<td>52 elderly women and men in southeast Florida</td>
<td>Descriptive survey</td>
<td>Health is a God-given gift 3 largest contributors to health: food, one's own behavior and exercise</td>
</tr>
<tr>
<td>Somera (1997)</td>
<td>How do elderly Filipinos view aging?</td>
<td>Government-sponsored home for 243 elderly in metro Manila</td>
<td>Ethnography with life story discussions with 6 residents</td>
<td>Themes: manageability and compromise; religiosity; conformity and social acceptance; social status and hiya (shame). Growing old was not important to self-identity</td>
</tr>
<tr>
<td>Watkins &amp; Gerong (1997)</td>
<td>How do Filipino college students compare to U.S. and Hong Kong Chinese students</td>
<td>157 first-year Filipino college students studying psychology</td>
<td>Quantitative / Twenty Statements Test administered in English which may have forced cultural accommodation</td>
<td>Filipinos made greater use of the global identity category and gave higher % of positive self-descriptions than others. “We orientation” may be family-related and not generalizable to other social relationships. Three of the Big Five personality traits used by all groups (extraversion, agreeableness, conscientiousness)</td>
</tr>
<tr>
<td>Wolf (1997)</td>
<td>To discover reasons for high rates of suicidal ideation (46.5%) and attempts (23%) for Filipino high school students measured in CDC survey.</td>
<td>Filipino second generation high school students in San Diego with professional parents coming to U.S. in 1970s</td>
<td>Phenomenology/ four focus groups with 4 males, 18 females. Participants were asked: “What does it feel like to be Filipino?”</td>
<td>Half of sample gave strong, spontaneous and emotional statements about family being at the center of meaning of being Filipino. None of 6 suicidal female students in the group had sought counseling. Intense academic pressure, especially on girls. Assimilation easier for males. “Emotional transnationalism” = gap between family ideology and practices.</td>
</tr>
<tr>
<td>Pettierra (1995)</td>
<td>How do people decide about working overseas?</td>
<td>Overseas workers from different barrios in Zamora, Ilocos Sur</td>
<td>Case studies of 3 domestic workers and a nurses aide who had worked in 3 countries</td>
<td>Problems of lack of employment for professionals, separation from family, and obligation to send money home. Siblings often brought over to work in the same business.</td>
</tr>
<tr>
<td>Author</td>
<td>Study purpose</td>
<td>Participants/Setting</td>
<td>Method/Data</td>
<td>Results</td>
</tr>
<tr>
<td>--------</td>
<td>---------------</td>
<td>---------------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Boren (1994)</td>
<td>To explore the relationships between value orientations, perceived barriers and benefits of preventive health behavior, and cardiovascular health risk status</td>
<td>Sample from the LIVE Clinic (Lanakila Immigrant Vaccination and Evaluation) of 61 Filipina immigrants in Hawaii &lt; 1 year age 18 – 47 (mean = 29.2) 72% had college degree or some college</td>
<td>Quantitative/ Values Orientation Scale, Heart Test for Women and other measures</td>
<td>No relationships between dependent and independent variables. Sample valued traditional family, self-development and planning for change. 82% had elevated total cholesterol/HDL levels and had low levels of exercise; 37% had central obesity, 59% reported high stress levels.</td>
</tr>
<tr>
<td>Pettiera (1992)</td>
<td>To describe how and why family members decide whether or not to migrate to other countries as overseas contract workers</td>
<td>20 migrant families and 5 non-migrant families for each of the two barrios (one urban, one rural) in Baluac, Ilocos Norte</td>
<td>Unstructured interviews with 5 months of field work</td>
<td>Most families view an overseas experience as valuable even with difficulties of separation and sending remittances. Irony that college-educated children must go abroad and send money home so parents can have domestic help did not come up.</td>
</tr>
<tr>
<td>Asian Social Institute/ Catholic Church (1987)</td>
<td>To explore the phenomenon of Filipino outmigration</td>
<td>Youth from Luzon (2,450), Mindanao (1,250) and Visayas (821)</td>
<td>Participatory action research</td>
<td>Top problems personally experienced by youth: lack of money, desire to help the family, wanting a taste of the good life.</td>
</tr>
<tr>
<td>Australia’s Department of Ethnic Affairs / Philippine Consulate General (1987)</td>
<td>To explore the phenomenon of Filipino outmigration</td>
<td>46 Australian-Filipino married couples</td>
<td>Not specified</td>
<td>Chief cause of failed marriages was the inability of Australian husbands to grasp the concept of strong family ties and filial devotion.</td>
</tr>
<tr>
<td>Ascano (1997)</td>
<td>To explore the experience of cultural adjustment after the encounter with culture shock</td>
<td>10 Filipino college graduates who had been in the U.S. for at least four years</td>
<td>Phenomenology/ structured interviews in English</td>
<td>Immigrants with realistic expectations have only a brief culture shock; less difficulty adjusting if new lifestyle is an improvement over previous lifestyle and with established support system from same ethnic background; 3 phases of cultural adjustment: culture shock, ethnic awareness, embracing a hyphenated identity.</td>
</tr>
<tr>
<td>Factors</td>
<td>Categories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age in years</td>
<td>30 to 59</td>
<td>60 to 79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years in Hawai‘i</td>
<td>1 to 4</td>
<td>5 or more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years with type 2 diabetes</td>
<td>1 to 4</td>
<td>4 or more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HgbA1c</td>
<td>6 to 7.4%</td>
<td>7.5% or higher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For &gt; 59 years old, travel to PI</td>
<td>Sojourner or circulator</td>
<td>Stayer (in US) or undecided</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 5. Quantitative Data on Participants Interviewed

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Years w/ DM</th>
<th>Hgb A1c</th>
<th>Uninsured Code</th>
<th>Employed</th>
<th>To PI &gt;60</th>
<th>Interview</th>
<th>Anne PCP</th>
<th>Yrs in HI</th>
<th>CDSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>62</td>
<td>Female</td>
<td>5</td>
<td>8</td>
<td>A, C</td>
<td>Yes</td>
<td>St</td>
<td>11/7/2002</td>
<td>Yes</td>
<td>5</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>58</td>
<td>Female</td>
<td>2</td>
<td>10.5</td>
<td>A</td>
<td>Yes</td>
<td></td>
<td>11/12/2002</td>
<td>Yes</td>
<td>7</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>61</td>
<td>Female</td>
<td>7</td>
<td>7.1</td>
<td>D</td>
<td>Yes</td>
<td>St</td>
<td>11/21/2002</td>
<td>Yes</td>
<td>10</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>74</td>
<td>Female</td>
<td>4</td>
<td>7.9</td>
<td>B</td>
<td>No</td>
<td>S</td>
<td>11/19/2002</td>
<td>Yes</td>
<td>17</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>63</td>
<td>Female</td>
<td>5</td>
<td>8.1</td>
<td>A, E</td>
<td>Yes</td>
<td>St</td>
<td>12/12/2002</td>
<td>Yes</td>
<td>32</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>58</td>
<td>Male</td>
<td>22</td>
<td>7.3</td>
<td>A, B</td>
<td>Yes</td>
<td></td>
<td>12/10/2002</td>
<td>No</td>
<td>7</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>53</td>
<td>Female</td>
<td>5</td>
<td>7.4</td>
<td>B</td>
<td>Yes</td>
<td></td>
<td>2/7/2003</td>
<td>No</td>
<td>20</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>63</td>
<td>Female</td>
<td>2</td>
<td>8.2</td>
<td>E</td>
<td>No</td>
<td>C</td>
<td>11/26/2002</td>
<td>Yes</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>57</td>
<td>Male</td>
<td>1</td>
<td>6.4</td>
<td>D</td>
<td>Yes</td>
<td></td>
<td>2/14/2003</td>
<td>No</td>
<td>26</td>
<td>No</td>
</tr>
<tr>
<td>101</td>
<td>63</td>
<td>Female</td>
<td>3</td>
<td>6.1</td>
<td>B</td>
<td>No</td>
<td>St</td>
<td>10/18/2000</td>
<td>No</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>112</td>
<td>69</td>
<td>Female</td>
<td>2</td>
<td>7.6</td>
<td>A, E</td>
<td>Yes</td>
<td>C</td>
<td>11/21/2000</td>
<td>No</td>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Reasons for Lack of Insurance

- Seaman disqualified from work because of renal insufficiency
- Quit FT job to babysit grandchildren, now also has job < 20 hr; immigrated after 1996
- Paid under the table a full-time lei stringer, no benefits
- Application for Immigrant Health Insurance in process (later was qualified)
- School custodian job 3 hours/day; quit full time job after adopting child from Philippines; too much income for Medicaid
- Retired; disabled by stroke; Medicaid temporarily revoked for missing documentation
- In probationary period of job; will be insured next month
- Income too high for Immigrant Health Initiative
- Self-employed as taxi driver; income too high for Medicaid
- Babysits for grandchildren during the day, has PT job < 20 hrs.
- Employed by state Sr. Companion < 20 hr; immigrated after 1996

### Uninsured Code

- E = Income or assets too high for Medicaid or Immigrant Health Initiative

### If > 60 years old, the participant travels or relates to the Philippines as

- S = Sojourner, C = Circulator, St = Stayer, U = Undecided
<table>
<thead>
<tr>
<th>Factor</th>
<th>Participants in Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>30 to 59</td>
</tr>
<tr>
<td></td>
<td>#02, 06, 07, 10</td>
</tr>
<tr>
<td></td>
<td>60 to 79</td>
</tr>
<tr>
<td></td>
<td>#01, 03, 04, 05, 09, 101, 112</td>
</tr>
<tr>
<td>Years in Hawai’i</td>
<td>1 to 4</td>
</tr>
<tr>
<td></td>
<td>#09, 101, 112</td>
</tr>
<tr>
<td></td>
<td>5 or more</td>
</tr>
<tr>
<td></td>
<td>#01, 02, 03, 04, 05, 06, 07, 10</td>
</tr>
<tr>
<td>Years with diabetes</td>
<td>1 to 4</td>
</tr>
<tr>
<td></td>
<td>#02, 04, 09, 10, 101, 112</td>
</tr>
<tr>
<td></td>
<td>5 or more</td>
</tr>
<tr>
<td></td>
<td>#01, 03, 05, 06, 07</td>
</tr>
<tr>
<td>Most recent HgbA1c</td>
<td>6 to 7.4%</td>
</tr>
<tr>
<td></td>
<td>#03, 06, 07, 09, 10, 101</td>
</tr>
<tr>
<td></td>
<td>7.5% or more</td>
</tr>
<tr>
<td></td>
<td>#01, 02, 04, 05, 112</td>
</tr>
<tr>
<td>For &gt; 59 years old, travel to PI</td>
<td>Circulator, sojourner</td>
</tr>
<tr>
<td></td>
<td>#04, 09, 112</td>
</tr>
<tr>
<td></td>
<td>Stayer, undecided</td>
</tr>
<tr>
<td></td>
<td>#01, 03, 05, 101</td>
</tr>
</tbody>
</table>
Table 7. Rank ordering of participants by the ratio of the number of positive to negative emotional statements during interview and by HgbA1c.

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>Participant #</th>
<th>Ratio of the Number of Positive to Negative Emotional Statements</th>
<th>Participant #</th>
<th>HgbA1c</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>101</td>
<td>3.0</td>
<td>101</td>
<td>6.1</td>
</tr>
<tr>
<td>2</td>
<td>02</td>
<td>2.0</td>
<td>10</td>
<td>6.4</td>
</tr>
<tr>
<td>3</td>
<td>112</td>
<td>1.0</td>
<td>03</td>
<td>7.1</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>0.8</td>
<td>06</td>
<td>7.3</td>
</tr>
<tr>
<td>5</td>
<td>01</td>
<td>0.5</td>
<td>07</td>
<td>7.4</td>
</tr>
<tr>
<td>6</td>
<td>03</td>
<td>0.3</td>
<td>112</td>
<td>7.6</td>
</tr>
<tr>
<td>7</td>
<td>05</td>
<td>0.3</td>
<td>04</td>
<td>7.9</td>
</tr>
<tr>
<td>8</td>
<td>09</td>
<td>0.3</td>
<td>01</td>
<td>8.0</td>
</tr>
<tr>
<td>9</td>
<td>04</td>
<td>0.2</td>
<td>05</td>
<td>8.1</td>
</tr>
<tr>
<td>10</td>
<td>07</td>
<td>0.1</td>
<td>09</td>
<td>8.2</td>
</tr>
<tr>
<td>11</td>
<td>06</td>
<td>0</td>
<td>02</td>
<td>10.5</td>
</tr>
</tbody>
</table>
Table 8. Domains and categories with code counts.

<table>
<thead>
<tr>
<th>DOMAINS</th>
<th>CATEGORIES</th>
<th>COUNT</th>
<th>SUBCATEGORIES</th>
<th>COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers</td>
<td>Cultural</td>
<td>29</td>
<td>Alcohol</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Parties</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rice</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Soda</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sweets</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Finances</td>
<td>27</td>
<td>Free</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Poverty</td>
<td>1</td>
</tr>
<tr>
<td>Hunger</td>
<td></td>
<td>7</td>
<td>Craving</td>
<td>4</td>
</tr>
<tr>
<td>Insurance</td>
<td></td>
<td>20</td>
<td>Requirements</td>
<td>4</td>
</tr>
<tr>
<td>Job problem</td>
<td></td>
<td>24</td>
<td>Time</td>
<td>6</td>
</tr>
<tr>
<td>Explanatory</td>
<td>Diagnosis</td>
<td>49</td>
<td>Blood test</td>
<td>3</td>
</tr>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td>Collapse</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Doctor</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Drinking</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hospital</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Serious</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Surprise</td>
<td>3</td>
</tr>
<tr>
<td>Etiology</td>
<td></td>
<td>18</td>
<td>Body</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Food</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heat</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heredity</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lifestyle</td>
<td>3</td>
</tr>
<tr>
<td>Pathophysiology</td>
<td></td>
<td>62</td>
<td>Complications</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Symptoms</td>
<td>43</td>
</tr>
<tr>
<td>Family</td>
<td>Advice</td>
<td>41</td>
<td>Aunt</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Family Members</td>
<td>163</td>
<td>Child</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cousin</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Grandchild</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nephew</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Niece</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Parent / Parent-in-law</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Petitioning</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sibling</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spouse</td>
<td>32</td>
</tr>
<tr>
<td>Filipino</td>
<td></td>
<td>148</td>
<td>Character</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Emotions</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Filipino-American</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Friends</td>
<td>23</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td>27</td>
<td>Future / Aging</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Individual</td>
<td>6</td>
</tr>
<tr>
<td>DOMAINS</td>
<td>CATEGORIES</td>
<td>COUNT</td>
<td>SUBCATEGORIES</td>
<td>COUNT</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
<td>-------</td>
<td>--------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Self-Management</td>
<td>Diet</td>
<td>106</td>
<td>American Food</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Meat</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rice</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Salt</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sweets</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vegetables</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Water</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Exercise</td>
<td>49</td>
<td>Aerobic</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bicycle</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dancing</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Farm</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Golf</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Housework</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Swimming</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Walking</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Work</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Medication</td>
<td>38</td>
<td>Alternative Medicine</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Schedule</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Medical Visits</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monitoring</td>
<td>24</td>
<td>Weight</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Roles</td>
<td>58</td>
<td>Family</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Job</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Patient</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Social</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Strategy</td>
<td>170</td>
<td>Acceptance</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Avoidance</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Change</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Control</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Education</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Moderation</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prohibition</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Trying</td>
<td>18</td>
</tr>
</tbody>
</table>
**Figure 1. Model of Disparities in Health Care Outcomes for Ethnic/racial Minorities.**

<table>
<thead>
<tr>
<th><strong>Barriers</strong></th>
<th><strong>Use of Services</strong></th>
<th><strong>Mediators</strong></th>
<th><strong>Outcomes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal/Family</td>
<td>Visits</td>
<td>Quality of Providers</td>
<td>Health Status</td>
</tr>
<tr>
<td>• acceptability</td>
<td>• primary care</td>
<td>• cultural competence</td>
<td>• mortality</td>
</tr>
<tr>
<td>• cultural</td>
<td>• specialty</td>
<td>• communication skills</td>
<td>• morbidity</td>
</tr>
<tr>
<td>• language/literacy</td>
<td>• emergency</td>
<td>• technical skills</td>
<td>• well-being</td>
</tr>
<tr>
<td>• attitudes, beliefs</td>
<td></td>
<td>• bias/stereotyping</td>
<td>• functioning</td>
</tr>
<tr>
<td>• preferences</td>
<td>Procedures</td>
<td>Appropriateness of Care</td>
<td>Equity of Services</td>
</tr>
<tr>
<td>• involvement in care</td>
<td>• preventive</td>
<td>Treatment Efficacy</td>
<td>Patient Views of Care</td>
</tr>
<tr>
<td>• health behavior</td>
<td>• diagnostic</td>
<td>Patient Adherence</td>
<td>• experiences</td>
</tr>
<tr>
<td>• education/income</td>
<td>• therapeutic</td>
<td></td>
<td>• satisfaction</td>
</tr>
<tr>
<td>Structural</td>
<td></td>
<td></td>
<td>• effective</td>
</tr>
<tr>
<td>• availability</td>
<td></td>
<td></td>
<td>partnership</td>
</tr>
<tr>
<td>• appointments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• how organized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• insurance coverage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• reimbursement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• public support</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Summarize your proposed research. Outline objectives and methods.

The objective of this study is to understand how uninsured Filipino immigrants self-manage their type 2 diabetes. The study design is descriptive, using focused ethnography as the method. Data will be collected through interview and participant observation. Interview questions will be structured to elicit the participants’ explanatory model for diabetes and a description of the behaviors they practice to self-manage their diabetes. Interviews will be recorded by audiotape and field notes will be taken during the observations. This study is an expansion of a pilot study conducted by the investigator in 2000, and was approved by the Committee on Human Studies at UH.

2. Summarize all involvement of humans in this project (who, how many, age, sex, length of involvement, frequency, etc.) and the procedures they will be exposed to. Attach survey instrument, if applicable.

The participant observations will occur at one urban and one rural community health center site on Oahu for 20 hours at each site during clinic hours. The participants at these sites will be uninsured Filipino immigrants who are seeking free or low cost health care. Four participants from each site will be interviewed at a mutually agreeable time and setting. Settings could include the clinic, the participant’s home, or a suitable public location. The participants will be interviewed in English, with the clinic’s Filipino nurse present to serve as an interpreter if needed.

The interview questions are attached. The number of questions is greater than usual for a 45 minute interview because of the participants usually give short answers.

Check whether any subject of your research will be selected from the following categories:

[ ] Minors [ ] Pregnant Women [ ] Mentally Disabled [ ] Fetuses
[ ] Abortuses [ ] Physically Disabled [ ] Prisoners

3. Research involving humans often exposes the subjects to risks: For the purpose of this application, "risk" is defined as exposure of any person to the possibility of injury, including physical, psychological, or social injury, as a consequence
of participation as a subject in any research, development, or related activity which departs from the application of those established and accepted methods necessary to meet his needs, or which increases the ordinary risks of daily life, including the recognized risks inherent in a chosen occupation or field or service.

a. Check all the risks to human subjects that apply to your project:

[ ] Physical trauma or pain [ ] Deception [ ] Experimental diagnostic procedures

[ ] Side effects of medications [ ] Contraction of disease [ ] Experimental treatment procedures

[ ] Contraction of disease [ ] Worsening of illness [X ] Loss of privacy

[X ] Psychological pain [ ] Loss of legal rights [ ] Other - explain

b. Check procedures that will be used to protect human participants from risks:

[X ] M.D. or other appropriately trained individuals in attendance

[ ] Sterile equipment

[ ] Precautions in use of stressor or emotional material (explain below)

[ ] When deception used, subjects fully informed as to nature of research at feasible time (explain below)

[X ] Procedures to minimize changes in self-concept (explain below)

[X ] Confidentiality of subjects maintained via code numbers and protected files

[X ] Anonymity - no personally identifiable information collected

[ ] Others-- explain

c. Has provision been made to assure that Human Subjects will be indemnified for expenses incurred as a direct or indirect result of participating in this research?

[ ] Not applicable

[X ] No - The following language should appear in the written consent form:

I understand that if I am injured in the course of this research procedure, I alone may be responsible for the costs of treating my injuries.

[ ] YES, explain:

d. Are there non-therapeutic tests that the research subjects may be required to pay for?

[ ] Not applicable

[X ] No

[ ] Yes - explain below. The following language should appear in the written consent form:

I understand that I may be responsible for the costs of procedures that are solely part of the research project.
Appendix A - 3

4. Describe mechanism for safety monitoring: How will you detect if greater harm is accruing to your subjects than you anticipated? What will you do if such increased risk is detected?

If participants experience greater than anticipated psychological pain, this will be detected by the nurses conducting the interview because of their professional education and experience. Participants will be advised during the oral briefing that they can stop the interview at any time. Referral can be made to an on-site psychiatric social worker for an urgent assessment if necessary.

5. Briefly describe the benefits that will accrue to each human subject or to mankind in general, as a result of the individual's participation in this project, so that the committee can access the risk benefit/ratio.

Knowledge gained from the study may benefit the individuals who go to the clinics by improvement in the process of care. Educational offerings for uninsured Filipino immigrants may be improved by increased cultural appropriateness.

6. Participation must be voluntary: the participants cannot waive legal Rights, and must be able to withdraw at any time without prejudice.

Indicate how you will obtain informed consent:
- [ ] Subject (or Parent/Guardian) reads complete consent form & signs (written. form)
- [X] Oral briefings by PI or project personnel, with simple consent form (oral. form). Explain below the reason(s) why a written consent form is not used
- [ ] Other- explain

Approval for informed consent through an oral briefing will be used because requiring signed consent forms may deter potential participants with questionable immigration status.

7. Are there any other local IRB's reviewing this proposal? [X ] No   [ ] Yes, location?
AGREEMENT TO PARTICIPATE IN
Self-Management by uninsured Filipino immigrants with type 2 diabetes
Anne Leake, Principle Investigator
School of Nursing and Dental Hygiene
2528 The Mall Webster 413
Honolulu, HI 96822
808-956-5226

ORAL BRIEFING

Study Purpose and Procedures

This study will help doctors and nurses understand how Filipino immigrants with type 2 diabetes take care of themselves when they don’t have health insurance. This study will also be part of the plan of study for Anne Leake for her PhD from the University of Hawai‘i. If you decide not to join this study or want to stop your part, you may still attend this clinic with no change in your care.

If you decide to be part of the study, Anne Leake will interview you once for approximately 45 minutes, and the interview will be recorded on a tape. You will be asked about 15 questions about your diabetes. A nurse will be present to interpret if needed. The interview from the tape will be written down by a transcriber at a later time. Only Anne Leake, the transcriber, and Anne’s professor will read this. You may also read your interview.

Risks and Benefits

Some of the questions Anne Leake will ask may make you upset. You do not have to answer any questions you don’t want to answer, and you may end the interview at any time. You may also read the questions before you decide to join the study.

A chance you take if you join this study is the loss of privacy. To protect your privacy, the tape and transcript of the interview will be marked only by a coded number and kept in a locked cabinet in Anne Leake’s office. The tape will be destroyed at the end of the study. If the study is published in a health journal in the future, your name will not be used. You may benefit from this study if the clinic is made better by what is learned from the study. You will receive a $10 gift certificate from Longs Drug for your participation.

Certification
Do you understand what I have said?
Do you have any questions?
(If yes to questions) Does what I have said answer your question?
Do you agree to join this study and understand that while in this study you do not lose any of your legal rights, including the right to take legal action against Anne Leake or the University of Hawai‘i for negligence?
If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this study, contact: Committee on Human Studies, University of Hawai`i, 2540 Maile Way, Honolulu, HI 96822 Phone (808) - 956-5007.
Appendix C - 1

Introductory question for demographics:
Please tell me some things about yourself. (Prompt for age, how long living in Hawai‘i, family members in Hawai‘i and in the Philippines.)

1. How did you find out that you had diabetes?
2. How old were you then, and how old are you now?
3. What do you think caused your diabetes?
4. Why do you think your diabetes started when it did?
5. What did your doctor say caused this problem?
6. Who did you tell when you found out?
7. How does your diabetes make you feel?
8. Did anything change in your life when you found out you had diabetes?
9. What did you change in your life when you found out you had diabetes?
10. How do you know when you are doing well with your diabetes?
11. What is the most difficult thing about having diabetes?
12. How does being Filipino help you take care of your diabetes?
13. How does being Filipino cause you problems in taking care of your diabetes?
14. Do you know other Filipinos who have diabetes? (If yes, ask # 15 and #16)
15. How do they take care of their diabetes?
16. How is their experience the same or different from yours?
17. Is there anything else you would like to tell me?

Related questions:
Tell me more about that.
How did you feel when that happened?
What do you mean by that? CODE ___ ___ ___ ___ ___
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 BARRIERS</td>
<td>None</td>
<td>PAR</td>
<td>2</td>
<td>04/20/03</td>
<td>05/25/03</td>
</tr>
</tbody>
</table>

Broad range of things which interfere with diabetes self-management

| 3 CULTURAL BARRIERS | 3 | 06/15/03 | 00/00/00 |

Problems identified as Filipino which get in the way of self-management

| 4 ETOH BARR CULTURAL | 4 | 06/15/03 | 00/00/00 |

Filipino traditions around alcohol which could interfere with self-management

| 5 PARTY BARR CULTURAL | 4 | 06/15/03 | 00/00/00 |

Problems with Filipino parties which make SM difficult

| 6 RICE BARR CULTURAL | 4 | 06/15/03 | 00/00/00 |

Filipino values or beliefs related to rice which could hinder self-management

| 7 SODA BARR CULTURAL | 4 | 06/15/03 | 00/00/00 |

Qualities of soda for Filipinos

| 8 SWEET BARR CULTURAL | 4 | 06/15/03 | 00/00/00 |

Filipino traditions related to sweets

| 9 FINANCES BARRIERS Yes | 3 | 03/27/03 | 05/25/03 |

Refers to how things are paid for or funded

| 10 FREE FINANCES Yes | 4 | 04/12/03 | 04/18/03 |

| 11 POVERTY FINANCES Yes | 4 | 04/15/03 | 04/18/03 |

| 12 HUNGER BARRIERS Yes | 3 | 03/26/03 | 05/25/03 |

Physical as well as psychological hunger

| 13 CRAVING HUNGER Yes | 4 | 04/03/03 | 05/18/03 |

| 14 INSURANCE BARRIERS Yes | 3 | 03/27/03 | 05/25/03 |

Health insurance and life insurance

243
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUIREMEN</td>
<td>INSURANCE</td>
<td>Yes</td>
<td>4</td>
<td>04/13/03</td>
</tr>
</tbody>
</table>

Anything which one is required to do to get or keep medical insurance.

| JOBPROB    | BARRIERS    | Yes   | 3      | 05/26/03 | 05/26/03 |

Ways in which job interferes with DM SM.

| DISABILITY | JOBPROB    | Yes   | 4      | 04/04/03 | 05/26/03 |

| TIME       | BARRIERS    | Yes   | 3      | 04/03/03 | 05/26/03 |

Refers to time as a resource, not orientation to time.

| EM         | None        | Yes   | 2      | 03/27/03 | 04/20/03 |

Components of Kleinman's explanatory model which describe participants' about their diabetes.

| DIAGNOSIS  | EM          | Yes   | 3      | 03/27/03 | 07/13/03 |

circumstances at the time of the participant's diagnosis.

| BLOODTEST  | DIAGNOSIS   | Yes   | 4      | 04/05/03 | 04/18/03 |

| COLLAPSE   | DIAGNOSIS   | Yes   | 4      | 05/26/03 | 05/26/03 |

| DOCTOR     | DIAGNOSIS   | Yes   | 4      | 03/27/03 | 04/18/03 |

| DRINKING   | DIAGNOSIS   | Yes   | 4      | 04/03/03 | 04/18/03 |

| HOSPITAL   | DIAGNOSIS   | Yes   | 4      | 04/10/03 | 04/18/03 |

| SERIOUS    | DIAGNOSIS   | Yes   | 4      | 04/12/03 | 04/18/03 |

| SURPRISE   | DIAGNOSIS   | Yes   | 4      | 04/15/03 | 04/18/03 |

| ETIOLOGY   | EM          | Yes   | 3      | 03/27/03 | 05/26/03 |

Statements relating to the cause of diabetes.

| BODY       | ETOLOGY     | 4     | 07/13/03 | 00/00/00 |

Something changing in the body as a cause of diabetes.

<p>| FOOD       | ETOLOGY     | Yes   | 4      | 07/13/03 | 07/13/03 |</p>
<table>
<thead>
<tr>
<th>No</th>
<th>Topic</th>
<th>Etiology</th>
<th>Yes/No</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>HEAT ETIOLOGY</td>
<td>Yes</td>
<td>4</td>
<td>04/15/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td>32</td>
<td>SWEATING HEAT</td>
<td>Yes</td>
<td>5</td>
<td>04/05/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td>33</td>
<td>HEREDITY ETIOLOGY</td>
<td>Yes</td>
<td>4</td>
<td>04/05/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>34</td>
<td>LIFESTYLE ETIOLOGY</td>
<td>Yes</td>
<td>4</td>
<td>07/13/03</td>
<td>07/13/03</td>
</tr>
</tbody>
</table>

Level of activity or other factors (other than food) causing diabetes

<table>
<thead>
<tr>
<th>No</th>
<th>Topic</th>
<th>Yes/No</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>PATHOPHYS EM</td>
<td>Yes</td>
<td>3</td>
<td>03/27/03</td>
</tr>
</tbody>
</table>

What diabetes does to the body as understood by the participant

<table>
<thead>
<tr>
<th>No</th>
<th>Topic</th>
<th>Yes/No</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>COMPLICATI PATHOPHYS</td>
<td>Yes</td>
<td>4</td>
<td>03/27/03</td>
</tr>
<tr>
<td>37</td>
<td>AMPUTATION COMPLICATI</td>
<td>Yes</td>
<td>5</td>
<td>04/15/03</td>
</tr>
<tr>
<td>38</td>
<td>DEATH COMPLICATI</td>
<td>Yes</td>
<td>5</td>
<td>04/05/03</td>
</tr>
<tr>
<td>39</td>
<td>INSULIN COMPLICATI</td>
<td>Yes</td>
<td>5</td>
<td>04/04/03</td>
</tr>
</tbody>
</table>

Use of insulin as something to be avoided, and at the end of the continuum happen to you when you have diabetes

<table>
<thead>
<tr>
<th>No</th>
<th>Topic</th>
<th>Yes/No</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>SKINSORE COMPLICATI</td>
<td>Yes</td>
<td>5</td>
<td>04/13/03</td>
</tr>
<tr>
<td>41</td>
<td>STROKE COMPLICATI</td>
<td>Yes</td>
<td>5</td>
<td>04/27/03</td>
</tr>
<tr>
<td>42</td>
<td>SYMPTOMS PATHOPHYS</td>
<td>Yes</td>
<td>4</td>
<td>03/27/03</td>
</tr>
</tbody>
</table>

Physical and psychological conditions which participants attribute to it

<table>
<thead>
<tr>
<th>No</th>
<th>Topic</th>
<th>Yes/No</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>DEPRESSION SYMPTOMS</td>
<td>Yes</td>
<td>5</td>
<td>04/27/03</td>
</tr>
</tbody>
</table>

Psychological condition when mentioned by name by participant

<table>
<thead>
<tr>
<th>No</th>
<th>Topic</th>
<th>Yes/No</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>BAD DREAMS DEPRESSION</td>
<td>Yes</td>
<td>6</td>
<td>04/27/03</td>
</tr>
<tr>
<td>45</td>
<td>DIZZY SYMPTOMS</td>
<td>Yes</td>
<td>5</td>
<td>04/12/03</td>
</tr>
<tr>
<td>46</td>
<td>FATIGUE SYMPTOMS</td>
<td>Yes</td>
<td>5</td>
<td>04/12/03</td>
</tr>
<tr>
<td>47</td>
<td>HEADACHE SYMPTOMS</td>
<td>Yes</td>
<td>5</td>
<td>04/15/03</td>
</tr>
</tbody>
</table>
48 ITCHY SYMPTOMS Yes 5 04/12/03 04/18/03

49 JOINTS SYMPTOMS Yes 5 04/12/03 04/18/03

50 LIGHTNESS SYMPTOMS Yes 5 04/12/03 05/26/03

Bodily sensation when one is doing well with diabetes; may be physical is not divided that way by participants

51 HEAVY LIGHTNESS Yes 6 04/12/03 05/26/03

Overall bodily sensation not related to weight in pounds; possibly an e

52 NERVOUS SYMPTOMS Yes 5 04/03/03 04/18/03

53 HEART NERVOUS Yes 6 04/27/03 05/26/03

Describes symptoms related to nervousness as occurring in the heart

54 NOCTURIA SYMPTOMS Yes 5 04/12/03 05/26/03

Was subsumed under polyuria

55 SHAKEY SYMPTOMS Yes 5 04/13/03 04/18/03

56 SLEEP SYMPTOMS Yes 5 03/27/03 04/18/03

57 THIRSTY SYMPTOMS Yes 5 04/12/03 05/26/03

Occurs when hyperglycemic

58 TINGLING SYMPTOMS Yes 5 04/15/03 04/18/03

59 VISION SYMPTOMS Yes 5 04/03/03 04/19/03

60 WEARINESS SYMPTOMS Yes 5 04/12/03 04/19/03

61 FAMILY None Yes 2 03/27/03 07/12/03

This domain includes family members, advice and support from families, of Filipinos which participants identify as having bearing on their dial level code only when the word family or relatives was used by participa to the concept of family.

62 ADVICE FAMILY Yes 3 03/27/03 04/18/03

Code Word Parent Text Level Added Modified
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAMILY</td>
<td>PAR</td>
<td>3</td>
<td>04/18/03</td>
<td>07/10/03</td>
</tr>
</tbody>
</table>

Members of family specifically identified by their familial relationship:

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAMMEMBERS</td>
<td>FAMILY</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03 04/18/03</td>
</tr>
<tr>
<td>AUNTIE</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03 04/18/03</td>
</tr>
<tr>
<td>CHILDREN</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/10/03 04/18/03</td>
</tr>
<tr>
<td>COUSINS</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03 04/18/03</td>
</tr>
<tr>
<td>GRANDCHILD</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/10/03 04/18/03</td>
</tr>
<tr>
<td>NEPHEW</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03 04/18/03</td>
</tr>
<tr>
<td>NIECE</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03 04/18/03</td>
</tr>
<tr>
<td>PARENTS</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/10/03 04/18/03</td>
</tr>
<tr>
<td>INLAWS</td>
<td>PARENTS</td>
<td>Yes</td>
<td>5</td>
<td>04/10/03 05/26/03</td>
</tr>
<tr>
<td>PETITIONIN</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>03/27/03 08/23/03</td>
</tr>
</tbody>
</table>

Process of citizens requesting family members to be allowed to enter the status. May require waiting several years depending on marital status of petitioner. The petitioner who becomes a sponsor must bear full financial and medical debt for the person they sponsor.

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIBLINGS</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/15/03 04/18/03</td>
</tr>
<tr>
<td>SPOUSE</td>
<td>FAMMEMBERS</td>
<td>Yes</td>
<td>4</td>
<td>04/10/03 04/18/03</td>
</tr>
<tr>
<td>FILIPINO</td>
<td>FAMILY</td>
<td>Yes</td>
<td>3</td>
<td>03/26/03 05/26/03</td>
</tr>
</tbody>
</table>

Participants' description of what Filipinos are like. This category was of family because, with rare exception, being Filipino is described in how participants described other Filipino, excludes emotions.

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTED</td>
<td>CHARACTER</td>
<td>Yes</td>
<td>5</td>
<td>03/26/03 07/11/03</td>
</tr>
<tr>
<td>COMPLAININ</td>
<td>CHARACTER</td>
<td>Yes</td>
<td>5</td>
<td>04/13/03 07/11/03</td>
</tr>
<tr>
<td>Code Word</td>
<td>Parent</td>
<td>Text</td>
<td>Level</td>
<td>Added</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>LUCKY</td>
<td>CHARACTER</td>
<td>Yes</td>
<td>5</td>
<td>03/26/03</td>
</tr>
</tbody>
</table>

Describes situations that seem to happen by chance; may be related to cases

| 80 OPEN | CHARACTER | Yes  | 5     | 04/15/03 | 07/11/03 |

Receptive, willing to accept other people even if not Filipino

| 81 STUBBORN | CHARACTER | Yes  | 5     | 03/26/03 | 07/11/03 |

| 82 TOLERANT | CHARACTER | Yes  | 5     | 04/15/03 | 07/26/03 |

Willingness to coexist with cultural differences

| 83 EMOTIONS | FILIPINO | Yes  | 5     | 03/27/03 | 05/26/03 |

Feelings which may describe mood, but distinct from bodily sensations with symptoms. Occasionally describes a cognitive state which is usually an emotion.

| 84 CONFIDENCE | EMOTIONS | Yes  | 5     | 07/13/03 | 00/00/00 |

| 85 ENERGY | EMOTIONS | Yes  | 5     | 04/12/03 | 04/18/03 |

| 86 FEAR | EMOTIONS | Yes  | 5     | 04/01/03 | 04/18/03 |

| 87 FEELGOOD | EMOTIONS | Yes  | 5     | 04/13/03 | 05/26/03 |

Can be physical or emotion feeling related to when participant is doing

| 88 HAPPY | EMOTIONS | Yes  | 5     | 04/12/03 | 04/18/03 |

| 89 LONELY | EMOTIONS | Yes  | 5     | 04/27/03 | 05/26/03 |

| 90 SADNESS | EMOTIONS | Yes  | 5     | 04/24/03 | 05/26/03 |

| 91 THANKFUL | EMOTIONS | Yes  | 5     | 03/27/03 | 04/18/03 |

| 92 UNCERTAIN | EMOTIONS | Yes  | 5     | 04/03/03 | 07/11/03 |

Not sure about what is causing something happening now, usually related

<p>| 93 WORRY | EMOTIONS | Yes  | 5     | 03/26/03 | 04/19/03 |</p>
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>94 FIL-AM</td>
<td>FILIPINO</td>
<td>Yes</td>
<td>4</td>
<td>03/26/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describes the process or condition of becoming more American-like; usual second generation or someone who has adopted American customs, especial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95 EQUAL</td>
<td>FIL-AM</td>
<td>Yes</td>
<td>5</td>
<td>03/26/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equality in how one is treated or considered in the world or in specific medical care, or in Hawaii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>96 POLITICS</td>
<td>FIL-AM</td>
<td>Yes</td>
<td>5</td>
<td>03/27/03</td>
<td>08/07/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussed by men when asked if being Filipino caused problems in taking and as a reason for leaving PI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>97 FRIENDS</td>
<td>FILIPINO</td>
<td>Yes</td>
<td>4</td>
<td>03/30/03</td>
<td>09/02/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freinds of participant known to be Filipino</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>98 MOTIVATION</td>
<td>FAMILY</td>
<td>Yes</td>
<td>3</td>
<td>03/27/03</td>
<td>08/07/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>References to what motivates participants to engage in self-management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99 FUTURE</td>
<td>MOTIVATION</td>
<td>Yes</td>
<td>4</td>
<td>04/03/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation to time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 AGING</td>
<td>FUTURE</td>
<td>Yes</td>
<td>5</td>
<td>04/27/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101 HEALTHY</td>
<td>MOTIVATION</td>
<td>Yes</td>
<td>4</td>
<td>04/13/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102 INDIVIDUAL</td>
<td>MOTIVATION</td>
<td>Yes</td>
<td>4</td>
<td>04/15/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doing things for one's self</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103 SUPPORT</td>
<td>FAMILY</td>
<td>Yes</td>
<td>3</td>
<td>03/27/03</td>
<td>07/11/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ways in which participants give and receive support from family, friend</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>104 RELIGION</td>
<td>SUPPORT</td>
<td>Yes</td>
<td>4</td>
<td>04/01/03</td>
<td>08/07/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>References to God or going to church, but not a specific religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105 SM BEHAV</td>
<td>None</td>
<td>Yes</td>
<td>2</td>
<td>03/26/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any activity described by participant as something they or other people take care of their diabetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code Word</td>
<td>Parent</td>
<td>Text</td>
<td>Level</td>
<td>Added</td>
<td>Modified</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>------</td>
<td>-------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>106 DIET</td>
<td>SM BEHAV</td>
<td>Yes</td>
<td>3</td>
<td>03/26/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

Food or types of food consumed to take care of diabetes, or to cause di.

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>107 AMFOOD</td>
<td>DIET</td>
<td>Yes</td>
<td>4</td>
<td>05/23/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

Foods identified as typically American, not Filipino

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>108 MEAT</td>
<td>DIET</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>109 RICE</td>
<td>DIET</td>
<td>Yes</td>
<td>4</td>
<td>03/27/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>110 SALT</td>
<td>DIET</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>111 SWEETS</td>
<td>DIET</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>112 ALCOHOL</td>
<td>SWEETS</td>
<td>Yes</td>
<td>5</td>
<td>04/13/03</td>
<td>09/13/03</td>
</tr>
<tr>
<td>113 FRUIT</td>
<td>SWEETS</td>
<td>Yes</td>
<td>5</td>
<td>04/15/03</td>
<td>09/13/03</td>
</tr>
<tr>
<td>114 ICECREAM</td>
<td>SWEETS</td>
<td>Yes</td>
<td>5</td>
<td>04/24/03</td>
<td>05/01/03</td>
</tr>
<tr>
<td>115 SODA</td>
<td>SWEETS</td>
<td>Yes</td>
<td>5</td>
<td>04/10/03</td>
<td>09/13/03</td>
</tr>
<tr>
<td>116 VEGGIES</td>
<td>DIET</td>
<td>Yes</td>
<td>4</td>
<td>04/13/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>117 WATER</td>
<td>DIET</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>118 EXERCISE</td>
<td>SM BEHAV</td>
<td>Yes</td>
<td>3</td>
<td>07/13/03</td>
<td>00/00/00</td>
</tr>
</tbody>
</table>

Includes any activity which participants describe as exercise

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>119 AEROBIC</td>
<td>EXERCISE</td>
<td>Yes</td>
<td>4</td>
<td>05/26/03</td>
<td>07/13/03</td>
</tr>
</tbody>
</table>

Type of exercise which raises heart rate

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 BICYCLE</td>
<td>EXERCISE</td>
<td>Yes</td>
<td>4</td>
<td>04/18/03</td>
<td>07/13/03</td>
</tr>
<tr>
<td>121 DANCING</td>
<td>EXERCISE</td>
<td>Yes</td>
<td>4</td>
<td>04/15/03</td>
<td>07/13/03</td>
</tr>
<tr>
<td>122 FARM</td>
<td>EXERCISE</td>
<td>Yes</td>
<td>4</td>
<td>04/12/03</td>
<td>07/13/03</td>
</tr>
</tbody>
</table>

As a verb, the physical activity related to farming

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 GOLF</td>
<td>EXERCISE</td>
<td>Yes</td>
<td>4</td>
<td>04/13/03</td>
<td>07/13/03</td>
</tr>
<tr>
<td>Code</td>
<td>Exercise Type</td>
<td>Quantity</td>
<td>Start Date</td>
<td>End Date</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------------------</td>
<td>----------</td>
<td>------------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>Housework Exercise</td>
<td>Yes</td>
<td>04/15/03</td>
<td>07/13/03</td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>Swimming Exercise</td>
<td>Yes</td>
<td>04/27/03</td>
<td>07/13/03</td>
<td></td>
</tr>
<tr>
<td>126</td>
<td>Walking Exercise</td>
<td>Yes</td>
<td>04/12/03</td>
<td>07/13/03</td>
<td></td>
</tr>
<tr>
<td>127</td>
<td>Work Exercise</td>
<td>Yes</td>
<td>04/24/03</td>
<td>07/13/03</td>
<td></td>
</tr>
</tbody>
</table>

Refers to physical activity on the job of enough intensity that participant

<table>
<thead>
<tr>
<th>Code</th>
<th>SM BEHAV</th>
<th>Yes/No</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>128</td>
<td>Medication</td>
<td>Yes</td>
<td>03/27/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>129</td>
<td>CAM</td>
<td>Yes</td>
<td>03/27/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

Complimentary and alternative medicine = treatments not prescribed by a participant

<table>
<thead>
<tr>
<th>Code</th>
<th>SM BEHAV</th>
<th>Yes/No</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>ABULARTO</td>
<td>Yes</td>
<td>05/12/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

A traditional healer in Filipino culture who may use a variety of healing as the "quack doctor" by #01 participant

<table>
<thead>
<tr>
<th>Code</th>
<th>SM BEHAV</th>
<th>Yes/No</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>131</td>
<td>BITTERMO</td>
<td>Yes</td>
<td>05/12/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

A vegetable commonly found and used in Filipino cuisine. Now available as which acts as a hypoglycemic agent has been isolated from bittermelon.

<table>
<thead>
<tr>
<th>Code</th>
<th>SM BEHAV</th>
<th>Yes/No</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>132</td>
<td>MARUNGAY</td>
<td>Yes</td>
<td>05/12/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

A seeded vegetable whose seeds and leaves are used to lower blood pressure used in many Filipino dishes

<table>
<thead>
<tr>
<th>Code</th>
<th>SM BEHAV</th>
<th>Yes/No</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>133</td>
<td>NONI</td>
<td>Yes</td>
<td>05/12/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

A Polynesian fruit from trees; tastes vile; used locally for general arthritis, hypertension, and many chronic conditions with few studies to support

<table>
<thead>
<tr>
<th>Code</th>
<th>SM BEHAV</th>
<th>Yes/No</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>134</td>
<td>MEDVISITS</td>
<td>Yes</td>
<td>04/13/03</td>
<td>04/18/03</td>
</tr>
</tbody>
</table>

Going to the doctor, going to the clinic; lumped together but described by participants

<table>
<thead>
<tr>
<th>Code</th>
<th>SM BEHAV</th>
<th>Yes/No</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>135</td>
<td>MEDVISITS</td>
<td>Yes</td>
<td>03/26/03</td>
<td>05/26/03</td>
</tr>
</tbody>
</table>

Refers to checking a numeric reading of something measurable, such as blood pressure or weight
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent Text</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT</td>
<td>MONITORING</td>
<td>Yes</td>
<td>4</td>
<td>03/26/03</td>
<td>04/18/03</td>
</tr>
<tr>
<td>ROLES</td>
<td>SM BEHAV</td>
<td>PAR</td>
<td>3</td>
<td>04/18/03</td>
<td>07/11/03</td>
</tr>
<tr>
<td>FAMILYROLE</td>
<td>ROLES</td>
<td>PAR</td>
<td>4</td>
<td>09/13/03</td>
<td>09/00/00</td>
</tr>
<tr>
<td>CHILDCARE</td>
<td>FAMILYROLE</td>
<td></td>
<td>5</td>
<td>05/26/03</td>
<td>09/13/03</td>
</tr>
<tr>
<td>CHILDROLE</td>
<td>FAMILYROLE</td>
<td>Yes</td>
<td>5</td>
<td>07/10/03</td>
<td>09/13/03</td>
</tr>
<tr>
<td>PARENTROLE</td>
<td>FAMILYROLE</td>
<td></td>
<td>5</td>
<td>07/10/03</td>
<td>09/13/03</td>
</tr>
<tr>
<td>JOB</td>
<td>ROLES</td>
<td>Yes</td>
<td>4</td>
<td>03/27/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td>PATROLE</td>
<td>ROLES</td>
<td>Yes</td>
<td>4</td>
<td>07/11/03</td>
<td>07/11/03</td>
</tr>
<tr>
<td>SOCIAL</td>
<td>ROLES</td>
<td>Yes</td>
<td>4</td>
<td>04/13/03</td>
<td>05/26/03</td>
</tr>
<tr>
<td>MENSOCIAL</td>
<td>SOCIAL</td>
<td>Yes</td>
<td>5</td>
<td>04/13/03</td>
<td>09/13/03</td>
</tr>
<tr>
<td>STRATEGY</td>
<td>SM BEHAV</td>
<td>PAR</td>
<td>3</td>
<td>04/18/03</td>
<td>04/20/03</td>
</tr>
</tbody>
</table>

Roles in life which participants must manage; considered as role management for diabetes self-management.

Roles which participants played within the family.

In all cases, grandmothers who babysit for grandchildren of their workmates.

Roles held by children which are valued and they try to maintain. Management is part of self-management.

Roles held by parents which participants value and want to maintain in a reciprocal way.

Employment situations which either prevent insurance or cause problems.

Participant's view of their role as a patient in relationship to the center or its personnel.

Description of how participants behave in social situations.

Social events specifically for men where women are not included.

Words used to express their concept of self-management, particularly are somewhat reflects the stages of self-management described by other researchers of the participants.
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>148 ACCEPTANCE</td>
<td>STRATEGY</td>
<td>Yes</td>
<td>4</td>
<td>04/03/03</td>
<td>11/13/03</td>
</tr>
</tbody>
</table>
| Participants accepting diabetes as part of their life and making necessary strategies.

| 149 COPING      | ACCEPTANCE     | Yes   | 5     | 03/27/03    | 08/03/03     |
| 150 RELAX       | ACCEPTANCE     | Yes   | 5     | 04/15/03    | 08/03/03     |
| 151 EMOTIONSM   | RELAX          | Yes   | 6     | 07/10/03    | 07/31/03     |
| Description of how participant manages negative emotions.

| 152 AVOID       | STRATEGY      | Yes   | 4     | 03/26/03    | 11/13/03     |
| Staying away from food and social situations which are problematic when.

| 153 CHANGE      | STRATEGY      | Yes   | 4     | 04/05/03    | 11/13/03     |
| Behaving differently after diabetes diagnosis or education.

| 154 MAINTAIN    | CHANGE        | Yes   | 5     | 04/13/03    | 08/03/03     |
| Refers to either holding the gains with SM changes, or not getting worse already present.

| 155 PRETENDING  | CHANGE        | Yes   | 5     | 03/27/03    | 08/03/03     |
| Described by one participant as people with diabetes hiding behavior from mentioned were diet and alcohol.

| 156 PREVENTION  | CHANGE        | Yes   | 5     | 04/12/03    | 08/03/03     |
| Taking measures to prevent complications such as infection, amputation.

| 157 CONTROL     | STRATEGY      | Yes   | 4     | 03/26/03    | 11/13/03     |
| Vigilance and self-discipline regarding SM behaviors, especially food control.

| 158 EDUCATION   | STRATEGY      | Yes   | 4     | 03/27/03    | 07/31/03     |
| Activities to learn about diabetes, or if participant mentions their own education.

| 159 NUTRITIONI  | EDUCATION     | Yes   | 5     | 04/24/03    | 05/01/03     |

253
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Parent</th>
<th>Text</th>
<th>Level</th>
<th>Added</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>160 MODERATION STRATEGY</td>
<td>Yes</td>
<td>4</td>
<td>04/13/03</td>
<td>11/13/03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limiting frequency or quantity of foods and activities which are problem behaviors in diabetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>161 PROHIBITIO STRATEGY</td>
<td>Yes</td>
<td>4</td>
<td>04/15/03</td>
<td>11/13/03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Things that you should stay away from if you have diabetes, usually based on others' recommendations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>162 FATTY PROHIBITIO</td>
<td>Yes</td>
<td>5</td>
<td>04/24/03</td>
<td>11/13/03</td>
<td></td>
</tr>
<tr>
<td>163 SACRIFICE PROHIBITIO</td>
<td>Yes</td>
<td>5</td>
<td>03/26/03</td>
<td>11/13/03</td>
<td></td>
</tr>
<tr>
<td>164 TRYING STRATEGY</td>
<td>Yes</td>
<td>4</td>
<td>03/26/03</td>
<td>11/13/03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engaging imperfectly in goal-oriented behavior change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix E - 1

Report: External Audit of Anne Leake’s Study

Dates: June 3-13, 2003

Documents provided and used for the audit trail:
1. List: Participant information on year of birth, gender, HgbA1c, insurance, employment, and travel to the Philippine Islands
2. Table: Factors Which Might Influence Self-management Behaviors
3. List: Date of Interview, Anne PCP, Yr in HI, CDSM
4. Excerpt: Method section of research proposal, pp. 33-37
5. “Structured Interview Guide” (semi-structured interview guide for data collection)
6. Methodology: Chronology of Steps, Other Issues, Coding Process, Future Events
7. List of Code Words for File: All Files alphabetically listed
8. List of Code Words for File: all Files listed by count
9. Code Book: Family Tree
10. Code Book: Summary
11. Code Book: All Code Words
12. Highlights from field notes to support major categories
13. Summary of Participant Observation
14. Peer Debriefing
15. A Few Thought on Each of the Domains
16. Interview Transcripts with coding: 01, 02, 03, 04, 05, 06, 07, 09, 10, 101, 112
17. E-mail communication: 2/12, 2/14, 5/12, 5/14, 5/29, 6/2, 6/5, 6/10, 6/11, 6/12/03

Comments and Recommendations:
   Recommendation: List definitions of codes if using this as a table to report study results.

2. Document 2 Table: As planned, the PI identified factors with potential for identifying differences in characteristics of sample.
   Recommendation: Use factors to identify subsample data and compare results. Although the subsamples are small, the comparison might identify differences in self-management that would be useful in planning further research.

   Recommendation: List definition if using the acronym in reporting study results.

4. Document 4 Excerpt: Method section:
Design and Method

The PI used an ethnographic approach and data collection methods planned for the study. The design and data collection methods were consistent with the purpose of the study. The PI did not provide a list of documents examined but did write about reviewing clinic records and Filipino literature.

Recommendation: Because examination of documents was given as one data collection procedure, in the final report of the research, describe available documents examined and results.

Sample and Setting

Planned sample recruitment at one site did not occur when the site’s population did not meet inclusion criteria. Sample selection was at one site, with two pilot study interviews included in the total of 11 participants. Purposive sampling based on five factors occurred as planned. For one participant who did not meet one inclusion criterion, the PI justified inclusion on bases consistent with the purpose of the study, including gender, to compare results with those of a previously interviewed male participant.

Recommendations: Provide a summary of demographic characteristics of the sample for the final report. Provide or plan secondary data analysis based on factors for purposive sampling.

Protection of Human Subjects

The PI reported in Document 6: “no questions were raised during the oral briefings”. IRB approval is for 8/19/02 to 8/19/03.

Recommendation: If the names kept in the interview transcripts are pseudonyms, the use of pseudonyms needs to be mentioned in the final report. If the names kept in the interview transcripts are not pseudonyms they need to be removed or changed. In documents provided there was no mention of documents being de-identified. In transcripts of Interviews 01, 02, 03, and 04, the PI addressed participants by name. Names may be in other interviews but missed, despite searching for them in the audit. Searching via computer would help.

Data Collection

The PI provided a Chronology of Steps that, in general, reflected participant recruitment as planned (p. 35). All participant interviews were at the clinic except one a participant’s home and one at an agreed-upon convenient location. The interpreter was present at all except two interviews for which the interpreter was not needed. Key informant interviews were planned (p. 35) but in the audit trail there were no documents describing key informants or results of interviews.

Recommendation: Because the PI listed potential sites for participant observation, in the final report identify the planned sites used, ones not used, and additional participant observation sites and activities used. Process and product of key informant interviews...
need to be in the final report of the research, as well as results of examination of available documents, as indicated above.

Trustworthiness:
Credibility

In support of credibility the PI planned member checks, prolonged engagement, and peer debriefing. 1. Member checks: The PI did not mention conducting member checks with individual participants but indicated plans for a presentation for the group of participants on June 20, to invite feedback and record responses. This approach reflects the cultural competence of the PI in recognizing the value of group identity for the population from which the sample was drawn.

Recommendation: Discuss member checks in the final report of the research. Did the PI conduct member checks with individual participants? If so, what were the outcomes? How were results influenced by member checks? 2. Prolonged engagement: The PI has had extensive experience and had consistent presence during the months of study at the clinic from which she recruited participants. The length of time spent in the setting and degree of participant observation in the clinic and other community settings were sufficient to learn about the culture of the clinic and cultural context of the participants. The PI spent 113 recorded hours in participant observation in addition to years of experience in the clinical setting and community. 3. Peer debriefing: The Clinic Support Director participated in peer debriefing after each interview and further functioned as cultural broker and translator.

Recommendation: Record, in the final report of the research, the process and product of peer debriefing.

Transferability

To support transferability the PI planned a “thick description” (p. 36 of research proposal; p. 316, Lincoln & Guba, 1985) and purposive sampling. 1. Thick description: The auditor reviewed the beginning of the thick description in the documentation of coding and interpretation of data, summaries of process, and initial organization of the product.

Recommendation: Final evidence of the thick description will be in the final report of process, results, and conclusions. Inclusion of aspects recommended in this audit will help to provide a thick description. 2. Purposive sampling: The PI conducted purposive sampling as planned, which gave a wide range of data, based on factors identified as Factors for Purposive Sampling. Purposive sampling was based on factors that might influence self-management behaviors and indicate salient demographic and clinical characteristics with potential for differentiating behaviors. There were no data analyses or results summarized by factors.

Recommendation: See recommendation under Data Analysis.
Appendix E - 4

Confirmability

To support confirmability the PI planned: reflexive journal, triangulation, and audit trail. 1. Reflexive journal: The auditor did not receive a copy of the reflexive journal but the PI wrote that she recorded thoughts and impressions as soon as possible after an interview.

Recommendation: If the PI kept a reflexive journal, comments on its use are needed in the final report of the research. 2. Triangulation: The PI planned triangulation of methods through 80 hours of participant observation, semi-structured interviews, and examination of available documents. In a 6/9/03 Summary of Participant Observation and 6/11/03 e-mail communication, the PI documented participant observation experiences and hours: 26 hours at the interview data collection site, and 87 hours at community events and classes, totaling 113 hours of participant observation. The PI reported conducting 11 interviews and provided transcripts. The PI planned triangulation of data through HgbA1c recorded on clinic records, clinic staff opinions of client self-management, and interview data. In memos the PI documented her perception of client self-management. In Document 1 the PI recorded HgbA1c.

Recommendation: In the final research report, describe the convergence or divergence of results from the three data sources. 3. Audit Trail: The PI provided an audit trail of both raw data and the coding and interpretation process used to reduce the data, which were used for this external audit. Data can be traced from raw interview data to codes, to family tree of coding, and to notes titled, “A few thoughts on each of the domains” (6/9/03 e-mail communication). “Highlights from field notes to support major categories” (6/9/03 e-mail communication) is a document that supports domains but the research report needs further explication of how field notes, key informant interviews and examination of available documents support or contrast with major categories.

Recommendation: See recommendations regarding field notes, key informant interviews, and examination of documents. The final research report needs inclusion of results from all data sources to corroborate or contrast with results of the 11 participant interviews. Comments listed under Document 6, which contains Coding Process, has questions and recommendations about specific codes.

Dependability

To support dependability the PI provided an audit trail for this external audit. The PI provided adequate documents for the audit trail. As mentioned above, the audit trail will be complete with provision of aspects identified in recommendations of this audit.

Recommendation: See recommendations on field notes, key informant interviews, and examination of available documents.

Data Analysis

The PI provided complete transcribed interview data from 11 participants, coding, and other documents listed. The PI organized interview data into meaningful segments in open coding, identified domains, and labeled emerging categories and subcategories
under the four identified domains. Interviews, memos and comments indicate emerging cultural themes. The PI is finalizing cultural themes so the audit could not include evaluation of cultural themes’ fit with data and coding. In Document 12, section a., the PI summarizes field note support of a theme of group management, which is also reflected in interview data. In “A Few Thought on Each of the Domains” (Document 15) the PI suggests cultural themes (rice, worry and advice) that cut across domains, and these are consistent with interview data and analysis.

**Recommendation:** Documents 12 and 15 provide drafts of ideas for synthesizing statements of cultural themes. Use domains, categories and subcategories from interviews, results of key informant interviews, results of field notes, and results of review of available documents to synthesize statement of cultural themes. Support for statements would be strengthened by incorporating results from all data sources. Data analysis may lead to one cultural theme per domain or combining domains in a statement or there may be a domain or more with more than one cultural theme. The statement, “We are all in this together” (Document 12), based on field notes, is also an accurate reflection of interview data and seems a basis for a cultural theme. Interview data point to a part of that theme, or a subtheme, about individuals’ awareness of making personal changes that sometimes conflict with group customs (evidenced in subcategories parties, holidays, mensocial), which seems would pose a dilemma in a culture with customs of gathering together and sharing. Perhaps the PI sees an SM cultural theme that is both supplemented by and at odds with a Family cultural theme, as the PI has parties and holidays as subcategories of Family.

In one document there was mention of a strategy to help saturation of categories. The PI has reviewed codes for potential collapsing of some subcategories.

**Recommendation:** The final report needs a statement of the degree of saturation for major categories and ones the PI thinks need more data before drawing conclusions. Data saturation will help determine support for a cultural theme. Subcategories supported by only one or two data segments are candidates for combining into other codes. Some can be reconceptualized and relabeled into existing codes or new codes into which other codes with more data segments can be incorporated. Some may be labeled accurately but not reaching saturation in this study.

**Anticipated Limitations**

**Recommendation:** for the final report, change anticipated to a revised accounting of limitations. Some may be different from anticipated ones. Some might not have turned out to be limitations. One might be the lack of eligible participants at one clinic, and the availability of only two men as participants, with one who had DM less than a year.

5. **Document 5 “Structured Interview Guide”:** The interview transcripts reflected the questions in the semi-structured interview guide. The PI used relevant probing questions to clarify responses or help participants expand responses.
Appendix E - 6

Recommendation: In some cases the PI used a leading question, probably with the intent to help someone struggling with words. But the effect might be to use the PI's ideas, in some cases, rather than ideas originating with the participant. Examples of questions and responses to review: Interviews 02 p. 6 about sleep; 03 p. 1 about dizziness; 05 p. 8, PI introduced "dancing", 05 p. 8 introduced the idea of "allergies".

6. Document 6 Methodology: The description of the Chronology of Steps indicates that the process was consistent with plans and the purpose of the study. III. Coding Process helped trace events and processes in data analysis and interpretation for the audit. The suggestion by committee members to consider rice as comfort food fits with participants' common view of rice as essential, not allowable in too much quantity, and its limitation a sacrifice, even though several said this is not difficult. The suggestion about rice and to consider thinking versus feeling under worry, and to review dizzy and future are listed without mention of whether the PI has had an opportunity to review data and codes. The audit did not reveal a problem with rice, worry or dizzy, but Document 6 did not list rationale for further exploring the codes.

Recommendations: The code future could be reviewed for its closeness to data labeled worry, fear, or uncertain. Does worry have subcategories that could be labeled re: worry about death, inability to get care, family income insufficiency for care, being a burden on family, disability, for example? When people mention future, isn't it usually related to what might happen- worry or fear of something? It is not clear if this is the rationale behind the recommendation t reconsider future.

7. Document 7 List of Code Words for File: All Files alphabetically listed: Protection is listed in the code words but a not indicated it had been subsumed under prevention. There was also communication about some further revision of coding that was not included in the documentation, so some codes may be different from the ones to which the audit refers. Terrorism (Interview 06 p. 9) was not found in lists of code words. Perhaps it was recoded.

8. Document 8 List of Code Words for File: all Files listed by count: Recommendation: See recommendation under data analysis about reconsidering coding of subcategories supported by only one or two data segments, or deciding which codes may just be limited by lack of saturation.

9. Document 9 Code Book: Family Tree: The domain labels EM and Barriers are not used as category labels. It makes sense that a domain label would have different category labels under it. But the domain labels Family and SM Behav are also used as category labels for data.

Recommendation: To eliminate the logical inconsistency in coding that has two domains as categories, the first step would be to remove the domain labels from where category labels would be. Then data coded as Family can be recoded as Relatives if no specific relationship is identified, or sister, brother, or others, if specified. Data coded as SM
Behav can be recoded as the category or subcategory already used, such as Strategy. In the alphabetical list of codes, strategy is missing, but in the Code Book: Family Tree, strategy is listed under SM Behav. It seems the codes Diet, Education, Exercise, Medication, Monitoring, Roles and Strategy are equal level codes on pp. 3-4 but it is difficult to be sure because of the page break. If not, equal, perhaps Strategy (with subcategories Diet, Education, Exercise, Medication, and Monitoring as subcategories) could replace SM Behav and be equal with Roles under the Domain SM Behav, so the domain SM Behav would have two categories (strategies and roles) and several subcategories. Does Discrimination fit more in SM or Barriers than in Family?

10. **Document 10 Code Book: Summary**: Provided an alphabetical list of code words and incomplete definitions that confirmed coding as listed in the interview transcripts, but without full definition.

11. **Document 11 Code Book: All Code Words**: Provided an alphabetical list of code words and complete definitions that confirmed coding as listed in the interview transcripts.

   **Recommendations:**
   - For the code Childcare, consider revising the definition to: “In all cases, grandmothers who babysit for grandchildren who are children of their working adult children”.
   - For the code Family, delete “This domain includes” from the beginning of the definition.
   - For the code Relationship, consider deleting “Mention of” from the beginning of the definition.
   - For the code SM Behav, consider the following definition: “Any activity or persons described [delete by participant] as something or someone they or other people with diabetes do or who helps them to take care of their diabetes”.

12. **Document 12 Highlights from field notes to support major categories**: Overall, highlights from field notes provided support for domains and major categories as coded in the data analysis of interview transcripts. Two items mentioned in the highlights were not evident in interview transcripts: 1. “fear that taking too many medicines has a negative effect on the body” and 2. “problems with misunderstanding dosage change when switching from brand name to generics”. If these are in the interviews, they may be subtle and understood by the interviewer but not obvious in the analysis.

   **Recommendation**: If there are not enough data to corroborate these results, these may be areas to explore in further research.

13. **Document 13 Summary of Participant Observation**: As planned, the author engaged in participant observation through events at various sites, including enrolling in a course on Philippine Literature in English. She planned 80 hours. She completed 26 hours at the clinic site, 42 hours at community events, and 45 hours in the course, for a total of 113 hours.
   Recommendation: See recommendation under credibility

   Recommendations: Some thoughts to consider -
   **EM:** Under EM is the code “itchy” – seems the right place, but a thought about interpretation - In PI memos when participants mentioned “itchy” the PI considers that there may be over- attributing some general symptoms to DM. This may be accurate. But because itchiness in diabetes may be due to candidal infections of the skin and mucous membranes, including vaginitis, is it possible some women may be referring to this? It is something to pursue, for example, in future research by asking where itchiness occurs. In Filipino culture is it embarrassing for a woman to mention vaginitis in an interview? Please review use of “Doctor” and “Medvisit”, for example, in 01 p.7- doctor in this case seems more like medvisit- not having to do with EM. Maybe these two need clarification.
   **SM:** Statements about SM are consistent with data and codes for this domain.
   **Barriers:** In comments here, the PI mentions cultural barriers to SM like having to go to parties and men’s drinking sessions. This is an area to clarify. Codes for parties and holidays are under Family. The code for men’s drinking (mensocial) is in roles under SM. There is rational for these codes being there. But the PI also conceptualizes these as Barriers. In the audit this was an area carefully considered. It seems logical to think of these as barriers but in each case the participant said this is not difficult and there are strategies to deal with parties, holidays, and men’s social events. Putting these under Barriers is one approach but it makes sense if the PI put the codes elsewhere because the participants present them as challenges that do not prevent them from SM because they use strategies, and consequently do not present these events as barriers. The expected interpretation would be that these events are barriers. Because participants present them as challenges they have already overcome, are they still barriers? Why is Free a barrier? Should the code label be different?
   **Family:** The idea of cultural themes cutting across domains is an interesting synthesis that is consistent with data and analysis, and could supplement cultural themes that may be within a domain. Family management may more effectively capture the nuances of the domain. Is SM a subcategory of family management then? Are there activities and decisions that are more a personal choice that may run counter to family expectations or desires? These questions may help in weighing use of labels. Worry is addressed above. Are there subcategories of Worry, as listed above? It is not clear why the code Thankful is under family. It seems that whenever thankful is a code, it is in reference to being grateful for the service and staff, including the PI, at K-P. Can this code fit under SM related to Medvisit or Strategies? Is Equal under Family rather than SM because the family recommended it, not that the participant uses it?
16. **Document 16**: Interview Transcripts with coding: 01, 02, 03, 04, 05, 06, 07, 09, 10, 101, 112. The interview transcripts with coding and memos were easy to follow for tracking coding and interpretation. **Recommendations**: The recommendations related to coding imply reviewing interviews for specific decisions about changing code labels.

17. **Document 17**: E-mail communication. Response by e-mail to questions about the documents was helpful for the audit. Mahalo nui loa.
REFERENCES


National Institute of Nursing Research (2000). RFA NR-01-004.html


framework and testing an evaluative instrument for diabetes patient education.  

*Public Health Reports*, 103(1), 28-37.

*Diabetes Educator*, 24(1), 72-79.

*Social Science Medicine*, 46(12), 1531-1541.

Tom, L. (2001, September 29). *Diabetes as a major risk factor for stroke*. Presentation for the community sponsored by the American Heart Association at the Philippine Consulate General, Honolulu, HI.


