

**WHEN ONE'S CHILD IS ILL:
HELP-SEEKING BEHAVIOR OF TZ'UTUJIL MAYA MOTHERS
IN SANTIAGO ATITLÁN, GUATEMALA**

By
Janet Sung

In
Anthropology

Submitted to the
Department of Anthropology
University of Pennsylvania

Thesis Advisor: Dr. Fran Barg

2012

ABSTRACT

This study explores the help-seeking behavior of Tz'utujil Maya mothers with ill children in the town of Santiago Atitlán, Guatemala. Santiago Atitlán is well known for its retention of Maya culture. However, the *pueblo* is currently undergoing rapid “westernization”, and many aspects of the local traditional culture are being affected by the arrival of North American ideologies and commodities. One realm in which the meeting of the traditional and the modern is evident is the area of healthcare with the strong presence of both traditional medicine and biomedicine. This study utilizes ethnographic methods to develop a decision-making model in order to understand what mothers consider as they seek to cure their ill children in a town with such a variety of healthcare resources. The results show that various factors such as recognition of an illness and knowledge of a remedy, confidence in a particular treatment option, perceptions and costs of the different healthcare resources, and perceived seriousness of an illness all play a role in their actions, which is consistent with the literature. This study has been able to elaborate upon when Atiteco mothers perceive illnesses as “serious” and how this affects a mother’s response. The results also reveal how Atiteco women navigate a pluralistic health system by making use of both these disparate health systems in curing their children. These findings will help medical professionals in Santiago Atitlán better understand and serve their patient population.



Figure 1

Atiteco women—A young mother with her child, mother, and aunt

(Source: Katherine Bisanz, fellow Guatemala Health Initiative intern)

TABLE OF CONTENTS

1. INTRODUCTION.	1
2. BACKGROUND	2
2.1 Santiago Atitlán, Guatemala	2
2.2 Medical Pluralism in Guatemala	3
2.3 Health Resources in Santiago Atitlán	5
2.3.1 <i>Curanderas</i>	5
2.3.2 <i>The Centro de Salud</i>	6
2.3.3 <i>The Hospitalito Atitlán</i>	7
2.3.4 <i>Rx'iin Tn'amit</i>	8
2.3.5 <i>Private Doctors</i>	9
2.4 Illnesses Prevalent Among Children in Santiago Atitlán	9
2.5 Responding to Illness and Treatment Choice	11
3. METHODOLOGY	16
4. RESULTS	18
4.1 The First Step: Gauging Severity	20
4.1.1 <i>“Serious Illnesses”</i>	22
4.2 Self-Care and Lay Advice	23
4.3 Deciding to Seek Expert Help	24
4.3.1 <i>Driving Factors</i>	24
4.3.2 <i>Barriers</i>	25
4.4 Determining Treatment Choice	27
4.4.1 <i>Is it Mal de Ojo?</i>	27
4.4.2 <i>Choosing a Professional Healthcare Facility—Accessibility</i>	29
4.4.3 <i>Perceptions of the Professional Healthcare Facilities</i>	30
5. DISCUSSION	35
5.1 Atiteco Mothers' Help-Seeking Behavior	35
5.2. Navigating a Pluralistic Health System	37
5.3 Applying the Results	39
5.3.1 <i>Altering Help-Seeking Behavior</i>	39
5.3.2 <i>Addressing Barriers to Seeking Care</i>	40
5.3.3 <i>Recognizing Mal de Ojo</i>	42
5.4 Limitations and Future Research	43
ACKNOWLEDGMENTS	43
APPENDIX A	44
APPENDIX B	45
REFERENCES CITED	47

1. INTRODUCTION

I asked her about the early deaths of her two youngest children—a baby boy who died at 3 weeks and a baby girl who died at 3 months. They both had a high temperature and a cough. They would not drink her milk. It was the flu. Previously, with her older children, if they had a high temperature she would get medicines from the pharmacy such as aspirins and Bebetina—small ones for infants. She would also give them hibiscus tea for their high temperature. After 3 days of taking medicines, the illness would pass and she knew that it was only a high temperature and nothing more. However, with her last two children, 3 days passed but their illness did not. She did not look for help earlier because she could not leave her 7 other children, who were very young, at home. Her husband could not watch the children because he works all day. When she finally sought help in the clinic, she thinks she may have been too late. – June 13, 2011 Field Notes

This passage presents themes of child illness, medical pluralism, decision-making, and help-seeking. The following paper will address these themes within the context of the Tz’utujil Maya of Santiago Atitlán, Guatemala. When and where do Atiteco mothers seek help for their ill children in a town where existing healthcare resources range from self-treatment options to expert diagnosis and from the traditional to the modern, biomedical?

2. BACKGROUND

2.1 Santiago Atitlán, Guatemala

Santiago Atitlán is a town on the shore of the beautiful and vast Lake Atitlán in the department of Sololá. The population size of the town has expanded in recent years to be more than 40,000. The vast majority, 98%, of Atitecos are indigenous Maya while the remaining 2% are non-indigenous “*ladinos* (EPSUM 2009).” The indigenous people of Santiago Atitlán are specifically Tz’utujil Maya. The Tz’utujil Maya are one of the twenty-one indigenous groups in Guatemala. Other neighboring towns on the Lake are also highly indigenous, consisting mainly of Tz’utujil Maya or the closely related Kaqchikel Maya. Of these towns, Santiago Atitlán has the largest population of Tz’utujil Maya (Yol 2008).



Figure 2
Santiago Atitlán, Guatemala

Most Atitecos make their living from farming, livestock, trade and craft. Like most of Guatemala, this town has much poverty. In 2006, 76% of the population had a monthly income of less than 1,500Q—barely enough to cover basic needs (Yol 2008).

Santiago Atitlán is well known for its retention of Maya culture. Many of the residents still wear traditional dress, and many continue to speak in the Tz'utujil language. However, Santiago Atitlán is currently undergoing rapid modernization, and many aspects of the local traditional culture are being rewritten due to the arrival of North American ideologies and commodities. Schools are now taught in Spanish, and Spanish is widely used among the younger generation. Christianity is prevalent, sodas and packaged snacks are now commonly sold in *tiendas*, the younger generation listens to North American music, taxis have recently appeared shooting along the narrow streets, and the young men of Santiago Atitlán no longer wear the traditional dress.

2.2 Medical Pluralism in Guatemala

One realm in which the meeting of the traditional and the modern is evident is the area of healthcare with the presence of both traditional medicine and biomedicine. Historically, Guatemala has been absorbing different approaches to medicine ever since the Spanish arrived in America. Before the Spanish, Mesoamerica already had their curers who were skilled in a variety of therapeutic treatments, including herbal remedies. Mesoamerican popular medicine of this time explained illness in supernatural terms. With the arrival of the Spanish, Spanish medicine was transmitted to the New World. Popular Spanish medicine such as the fear of evil eye (*mal de ojo*) and the beliefs of European humoral medicine spread among the Mesoamericans and began to be used to explain illness and treatment practices. With time, Spanish medical thought coalesced with the existing American medical tradition to result in the folk medicine common to

the Maya and *ladinos* in Guatemala and Santiago Atitlán today (Sáenz and Foster 2001). Today, this medicine is being challenged once again by the mixture of biomedical thought—a situation many societies find themselves in due to the ongoing process of globalization.

There is already a decline in the use of traditional healing practices with the younger generation. During her fieldwork in Puerto de las Piedras, a rural Mexican community of Indian heritage, DeWalt found that the younger generations do not seem to have as strong a grasp of which herbal remedies to use for which illness conditions and where they can acquire the necessary plants. In addition, practitioners of biomedicine have rapidly become the most frequently consulted healthcare practitioners in Puerto de las Piedras (DeWalt 1977). This seems to be the case in Santiago Atitlán. In their initial community health assessment, Schram and Etzel found most respondents who sought curative care for their illnesses used a private doctor, Rx'iin Tn'amit, the Hospitalito, or the governmental health centers; rarely were *curanderas* (traditional healers) the first source of treatment (2005).

Despite biomedicine's increasing availability and accessibility, traditional medicine and plant-based health practices still persist (Brown and Barrett 2010, DeWalt 1997, Yukes 1997). Just as in the past Guatemalans had combined the elements of the humoral and popular Spanish medical systems in a way that made sense to them, they seem to be navigating the arrival of biomedicine in a similar way (Adams and Hawkins 2007). For example, herbal remedies are often used in conjunction with biomedical resources. Sometimes, people will use both a folk healer and a physician to treat an illness (Yukes 1997). Though biomedicine often dismisses folk healing, the people do not see a contradiction to utilizing both healing traditions. Adams and Hawkins attribute this syncretism of the traditional and modern health systems to the fact that both are available in an incomplete state. The traditional health system is incomplete because of

insufficient transmission of knowledge to the younger generations while the modern health system is only partially available because of inaccessibility of the modern health system and inadequate knowledge of biomedicine (Adams and Hawkins 2007).

2.3 Health Resources in Santiago Atitlán

When their children are sick, Atiteco mothers have a variety of health resources to choose from. For self-treatment, they can choose medicinal plants or pharmaceuticals. When seeking expert help, they can go to a *curandera*, doctors at three different main health centers, or private doctors.

2.3.1 Curanderas

Curanderas use herbal remedies and other folk curing methods to heal the sick. Though the Spanish brought along the concept of licensed doctors to Mesoamerica, those licensed doctors were inaccessible to the majority of the population and therefore not very utilized. *Curanderas* were traditionally the health experts to whom the poor first turned to for medical help (Sáenz and Foster 2001). There is no standard training to become a *curandera*—*curanderas* learn their trade through trial and error, learning from the parents and ancestors, and informally observing other *curanderas* (Yukes 1997).

During a typical visit to a *curandera*, the *curandera* will diagnose the illness and either tell the patient what medicinal plants he needs and where to find them, offer a prepared herbal remedy, or gather the appropriate ingredients and instruct the patients on how to prepare the remedy. The treatments utilized and prescribed vary among *curanderas*. There is a price to utilizing a *curandera*, and that also varies depending on the healer's reputation—how long she

has been practicing and her reported success in curing—and the severity of the illness (Carlsen and Prechtel 1994).

2.3.2 *The Centro de Salud*

The Centro de Salud is a governmental health clinic serving the population of Santiago Atitlán since 1972. As a governmental health clinic, its services and medicines are free. The Centro is located in the town center—its central location assuring that the clinic is fairly accessible to most of the population (See Appendix A for map). Interestingly, the Centro de Salud is mainly meant to serve the people living in the *cantones* of Tzanjuyu and Panaj while Xechivoy, Panul, and Pachichaj are served by Prodesco, a non-governmental organization that is financed by the government. However, Prodesco does not have a doctor—solely a nurse—and therefore the majority of Atitecos utilize the Centro for treatment of illness.

The Centro de Salud is quite small. Upon entering, one stands in a waiting room with two different examination rooms. There is a waiting room beyond along with some more examination rooms for prenatal care. The Centro has one director, Dr. Chumil, and three other doctors who take turns working 24 hour shifts so that there is always one doctor at the Centro, along with several nurses. The Centro is open on weekdays. Its hours do not seem to be stable as one informant stated that the hours are 7:00AM to 5:00PM whereas another stated 7:30AM to 8:30PM. However, CAP (Centro de Atención Permanente) operates 24/7 for emergency cases. During the day, the Centro has a system where patients come in the morning and get a number. More numbers are given out at 1:00 every day.

There are three Puestos de Salud, or health posts, for the farther communities of Chacaya, Cerro de Oro, and Chukmuk. There is a doctor at each of the *puestos* in Chacaya and Cerro de Oro while the *puesto* in Chukmuk is run by nurses. These *puestos* are similar to the Centro and

serve the people of those *cantones*. Each *canton* also has a Centro de Convergencia that serves as an extension of the Centro de Salud. These Centros de Convergencia are community facilities where people can go for checkups and more preventative health measures. There are no doctors at these centers.

2.3.3 The Hospitalito Atitlán



Figure 3
The newly constructed Hospitalito

The Hospitalito is Santiago Atitlán's only 24-hour emergency care hospital. It provides primary, surgical and emergency care. Before the Hospitalito was founded, the nearest hospital was a government two hours away in Sololà. *Clínica Santiaguito*, the predecessor to Hospitalito Atitlán, opened in the 1960's to provide healthcare to the people of Santiago Atitlán. However, after the 1990 massacre of 13 Atitecos by the Guatemalan Army in 1990, the Clínica was abandoned. The hospital was reopened in 2005 as the Hospitalito Atitlán through the effort of K'aslimaal, a grassroots organization established by community leaders, the local government, and two American non-profits (Schram 2005). Shortly after opening in 2005, the hospital was unfortunately destroyed in the mudslide that devastated the town during Hurricane Stan. As a

new hospital building was being constructed, the Hospitalito continued to operate from a transitional facility. The current Hospitalito building, a very nice facility, opened its doors in 2010. The Hospitalito is staffed by Guatemalan doctors, registered and auxiliary nurses, a laboratory technician, and a pharmacist. Additionally, the hospital is temporarily staffed by international doctors, nurses, and other volunteers year round for short and long-term periods. There can be as few as two doctors in the entire hospital or as many as 5 or 6 depending on the season and how many volunteers are present.

According to the hospital, the services have a cost, but there is a sliding scale system based on evaluation of socioeconomic conditions. Patients are treated first and not asked about money and then evaluated by a social worker afterward. Due to the sliding scale system, one can even cut the grass at the hospital as payment, and the Hospitalito claims that they ultimately provide a lot of care for free.

2.3.4 Rx'iin Tn'amit

Rx'iin Tn'amit, referred to as “*la Clínica*” is a cooperative, or association of local people, that came out of the *Clínica Santiaguito* when it closed in 1993. Rx'iin Tn'amit was opened in the municipality of Santiago Atitlán with the purpose of continuing the work of the Santiaguito to satisfy the need for medical care. It is located very close to the Centro de Salud. The services they offer include general medical consultations, birth control, family planning services, clinical laboratories, ultrasound and Pap smears, dental services, and health counseling. The services have a cost, but it is minimal. For example, a consultation will cost 20Q. Its hours are 8:00 AM to 8:00 PM on weekdays. Rx'iin Tn'amit is quite spacious compared to the Centro de Salud. Rx'iin Tn'amit also has only one doctor working at a time, along with two nurses and an assistant.

2.3.5 Private Doctors

Private doctors in Santiago Atitlán are mainly doctors from the Hospitalito or the Centro de Salud that treat patients when they are not on shift or when they have retired (Gradilla 2011). These doctors are general doctors—there are no specialists within Santiago Atitlán.

2.4 Illnesses Prevalent Among Children in Santiago Atitlán

Guatemala has the highest under-5 mortality rate among Central American countries and is surpassed in the region of the Americas only by Bolivia, Guyana, and Haiti (WHO 2009). According to a community health assessment conducted of Santiago Atitlán in 2005, Atitecos have identified gastrointestinal disease, chronic pulmonary and acute respiratory illness, and mental health problems as common and serious illnesses affecting the community (Schram and Etzel 2005). Gastrointestinal disease is the most common health problem in Santiago Atitlán, and it may be due to contaminated water. In the health assessment, 80% of households obtained their drinking water from Lake Atitlán via taps supplied by the municipal water pump. Of these households, 60% did not treat or boil the lake water before drinking. Also, before eating raw fruits and vegetables, the majority of households (85%) washed them without treating or boiling the lake water from the tap (Schram and Etzel 2005). Respiratory illnesses are prevalent in the community, and many healthcare workers believe it is due to the wide use of wood burning stoves. When one views Santiago Atitlán from the lake, there is consistently a thick cloud of smoke covering the town due to the wood fires. The health assessment found that only 4% of households used a gas or electric stove to make corn tortillas—the staple of the Tz’utujil diet—even though 18% of these households had such stoves. The study also found that one-half of the households did not have a chimney to remove the smoke from the kitchen or house.

The findings of Schram and Etzel's study on the prevalence of gastrointestinal infections and respiratory illnesses are confirmed by the Centro de Salud and Rx'iin Tn'amt's records (Figure 4, Table 1) on the most frequent causes of morbidity in children and leading causes of consultation. The Hospitalito does not yet keep records on the causes of consultation according to age demographics, but talks with the physicians there revealed that children are similarly usually brought to the Hospitalito for asthma, pneumonia, upper respiratory infections, and gastrointestinal infections.

Figure 4: Most Frequent Causes of Morbidity in Children Less Than 1 Year (Centro de Salud 2010)

- Common cold
- Tonsillopharyngitis
- Pneumonia
- Diarrhea
- Intestinal parasitism
- Dysentery
- Dermatitis
- Sarcoptiosis
- Conjunctivitis
- UTI

Most Frequent Causes of Morbidity in Children from 1 to 4 Years Old

- | | |
|-------------------------|---------------------|
| • Common cold | • Dermatitis |
| • Tonsillitis | • Sarcoptiosis |
| • Pneumonia | • Impetigo |
| • Bronchitis | • UTI |
| • Intestinal parasitism | • Conjunctivitis |
| • Diarrhea | • Anemia |
| • Dysentery | • Accidental lesion |

Table 1: Leading Causes of Consultation in Children under 5 at Rx'iin Tn'amt (2005)

Cause	Number of Cases
Common cold	256
Skin disease	69
Tonsillitis	61
Acute diarrhea	56
Pharyngitis	41
Bronchopneumonia	34
Intestinal Parasitism	22
Amebiasis	21
Bronchospasm	15
ITU	6
Conjunctivitis	6
External Otitis Media	4

2.5 Responding to Illness and Choosing Treatment

There are many anthropological studies on treatment choice. Anthropologists have traditionally utilized two different approaches to analyze treatment choice—the correlational paradigm and the decision-making approach (Young and Garro 1981). The correlational paradigm looks for patterns between a specific treatment choice and an individual's characteristics or the illness's characteristics (Young and Garro 1981). For instance, there may be a correlation between the age of an individual and the individual's treatment choice. Also, if the illness is a culture-bound illness, it has been seen that people almost always utilize traditional curing methods (Leyn 1999). The decision-making approach describes the decision-making process and tries to understand what influences an individual's decisions and actions as the individual interacts with the illness (Young and Garro 1981). This approach presumes that culturally shared decision-making processes exist that researchers may discover through ethnography (Young and Garro 1981). This approach is more useful in understanding people's treatment choices when it comes to illnesses with what George Foster terms “naturalistic” etiologies (1976).

Young and Garro utilized the decision-making approach in studying treatment choice among Tarascan villagers in Pichátoro, Mexico. These villagers had four different healthcare resources—home remedies, *curanderas*, *practicantes* (“local, nonphysician, practitioner of modern medicine”), or physicians. Young and Garro developed an ethnographic decision model that revealed that treatment choice among these villagers depended on four factors: perceived seriousness of the illness, whether a herbal remedy for the illness was known, an individual's confidence in a specific treatment option, and the accessibility of a specific treatment option (1981). When an illness was not perceived as serious, Young and Garro found that the general

pattern of decision-making was ordered by cost, where a villager would start with the cheapest alternative, a home remedy. If no home remedy was known, or if the illness continued despite home remedies, the villagers would consult either a *curandera* or *practicante*, depending on the villager's confidence in herbal remedies or medical remedies for that illness. Confidence in either mode of treatment may change in the individual's life according to his experiences with previous attempts at treatment. Only after the less costly options have been attempted, do villagers turn to the most expensive alternative, the physician. The general belief amongst these villagers was that the physician was most likely to successfully treat illness, but for most illnesses either home remedies or medical remedies would be effective (Young and Garro 1981). However, when an illness is considered serious, their decision-making was instead ordered by "probability of cure," where a villager would start with the alternative most likely to result in a cure—a physician—and cost is a less important consideration. The other alternatives would be utilized only after the physician proves unsuccessful (Garro 1998).

In 1999, Leyn carried out a similar study with the K'iche' Maya of Santa Catarina Ixtahuacán, a town only a 1 hour drive away from Santiago Atitlán. Leyn identified six options for treatment that Ixtahuaquenses can choose from: self-treatment with herbal remedies, traditional healers, a Puesto de Salud, and various clinics, pharmacies, and stores. She found that the factors influencing initial treatment choice in Ixtahuacán were knowledge of and access to medicinal plants, cost of treatment, and recognition of the illness. If an illness was recognized and a plant remedy was known, the plant remedy would be the first choice. If the illness was not recognized, or a plant remedy was unknown, cost would determine where a person would seek help. If cost was an issue, the person would choose the Puesto de Salud; otherwise, a person would go to the pharmacy or clinics depending on which was open and the person's perceptions

of the different facilities. In terms of initial treatment choice, Leyn found that the vast majority of Ixtahuaquenses chose to self-treat with herbal remedies (110/181 illness cases). Harris also noted that medicinal plants were normally the initial treatment for sickness among Ixtahuaquenses, and he attributed this to the people having had knowledge of medicinal plants for so many generations (1996).

Young and Garro similarly found that self-treatment with herbal remedies at home was the typical initial response (1981). Young and Garro and Leyn's findings are consistent with the literature on hierarchies of resort. Generally, people initially resort to seeking treatment at home using their knowledge of remedies, especially if the illness is relatively benign. If their knowledge of remedies is insufficient, they may resort to advice from laypersons with greater knowledge. If treatment at home does not work, the illness is considered serious and an individual will move up the hierarchy of resort to a professional healthcare specialist whether it be a folk healer or a practitioner of modern medicine (Brown and Barrett 2010, Lipp 2001).

Because the initial source of treatment sought by Ixtahuaquenses was largely self-treatment, Leyn also examined subsequent treatment choices to understand the variables affecting treatment choice after attempts at self-treatment are unsuccessful. She found that preceding choice, perceived seriousness of the illness, and cost were the factors determining subsequent treatment choice. In regard to the factor of preceding choice, Leyn saw that when a treatment was unsuccessful, a patient's perception of which treatment option was most effective often changed. As for the variable of perceived seriousness, Leyn used three categories of severity: "not serious" for illnesses that are mainly a short inconvenience with patients able to continue their normal activities, "moderately serious" for illnesses that interrupt a person's daily

routine and typically does not improve after initial treatment attempts, and “grave” for illnesses that are life-threatening.

Leyn and Young and Garro identified the same variables to be involved in treatment choice: perceived seriousness of the illness, recognition of the illness and knowledge of a remedy, perception of which treatment is most effective, and the accessibility of each treatment. Both studies saw that choices are often cost-ordered, which is consistent with other studies that have shown that wealth is the most important predictor of physician use (DeWalt 1977). DeWalt found that economic and structural variables are often greater factors in decision-making than cultural variables. For instance, cultural variables do not seem to be as great a factor as DeWalt found no correlation between a villagers’ use of herbal remedies and use of traditional healers when seeking expert help (1977).

The variables above have also been identified by researchers in health psychology. Psychologists have developed what they call the Health Belief Model (HBM), and this model is the most commonly used psychosocial approach to explaining health-related behavior (Strecher and Rosenstock 1997). Although initially developed to explain why people do not participate in public health and prevention programs, the HBM has been extended to apply to people’s behavior when responding to illness symptoms (Kirscht 1974). In the HBM, perceived seriousness of an illness provides a force leading to action. Then, an individual’s belief about the availability and effectiveness of various options determines the individual’s treatment choice. If the readiness to act is high and the barriers to using a certain treatment option are weak, the individual will choose that treatment. However, if the readiness to act is weak while the negative aspects to using a certain treatment option are high, the individual will choose an alternative source of treatment, if it is perceived to be as effective and if it is available, or not follow through

on the action at all (Rosenstock 2005). The HBM also recognizes personal and social characteristics such as age, gender, culture, and education as “modifying factors” in health behavior (Kirscht 1974).

As for Santiago Atitlán, there has not been much research into help-seeking behavior and treatment choice there. In their initial health assessment, Schram and Etzel did look into what factors caused respondents not to seek help for illness, and they found that 48% stated lack of money, 16% said they were not help enough to need care, 10% said it was because the treatment site had inadequate medicine and equipment, and 8% stated that they were not confident in the healthcare providers (2005).

This study will elaborate on this initial assessment by attempting to understand how Atiteco mothers make decisions about whether and where to seek help for their ill children. Garro found that while a decision-making model is a good means to understanding the cognitive process of the decision-making itself, it often falls short when its primary aim is to predict treatment actions (1998). Therefore, the main purpose of this study is not to predict treatment choice among Atitecos but rather to understand the cognitive process underlying their decisions and actions. By constructing a decision model using ethnographic data, this study will identify the variables influencing Atiteco treatment decisions are similar to those that have been identified by Young and Garro, Leyn, and psychology’s HBM. The findings of this study will also reveal whether Atiteco women follow the typical hierarchy of resort as they seek to cure their ill children and show how Atitecos have reconciled their comfort with traditional medicine on one hand and the possibility of better outcomes with modern medicine on the other.

3. METHODOLOGY

Primary data collection was carried out from June to August 2011. It included participant observation and semi-structured interviews. Participant observation involved observing visits to the different healthcare facilities in the *pueblo*, including the Centro de Salud, Rx'iin Tn'amit, and the Hospitalito Atitlán; and conversing with the healers there and the mothers who came with their ill children.

One hundred and nine semi-structured interviews were conducted with indigenous mothers. The semi-structured interview started with the mother being asked for her age, the number of children she had, the ages of her children, and whether she is literate in Spanish. The mother was then asked whether any of her children have had a serious illness when they were 5 years or younger. If the mother answered yes, clarifying questions were asked to ascertain what actions she had taken. If the mother answered no that her children have never had a serious illness, the mother was asked whether her children have ever felt badly. If they had, probing questions were asked to ascertain what actions she had taken. If the mother answered that her children had never been ill, she was asked "In your opinion, what is a serious illness affecting children?"

Stratified purposive sampling was utilized to gather a sample of mothers from each of the major *cantones* Chukmuk, Pachicaj, Panabaj, Panaj, Panul, Tzanchaj, Tzanjuyú, and Xechivoy and the *aldeas* Cerro de Oro and Chacaya. Because of the lack of a household level map, samples were not able to be randomly collected, although an effort was made to select participants across the entire region of each *canton*. Interviews were conducted on every 6th house as I weaved my way through a *canton*. I made sure to include narrow footpaths between buildings and count the doors to homes along such paths. If there was no answer at a home, I

proceeded to the house to the right. After three such attempts with the adjacent homes, I moved on to the 6th house. Some chain referral sampling was also utilized as mothers that were interviewed referred me to other mothers. Therefore, this study ultimately made use of mixed purposive sampling (Patton 1990).

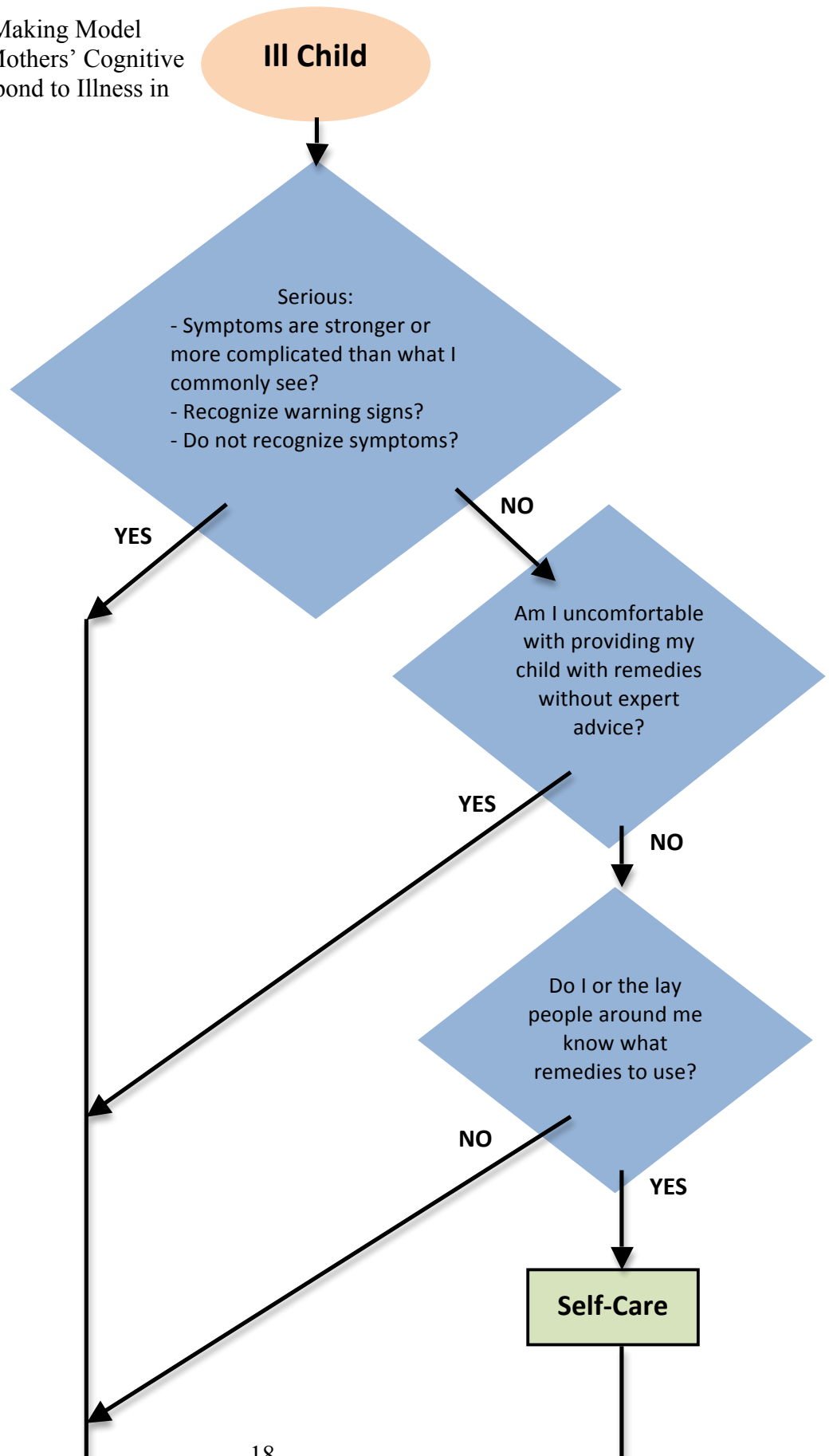
The mothers interviewed ranged from 17 to 82 years of age with a mean of 40 ($\sigma=13$). About three of every four households chose not to participate, which may introduce a form of sample bias. For women who did not speak Spanish, a field assistant was present to facilitate translation between Spanish and Tz'utujil. A research partner conducted some of the semi-structured interviews during the first month of collecting preliminary data. Having a partner help gather data helped decrease the potential for bias and also improved sample size in the limited time fieldwork was conducted.

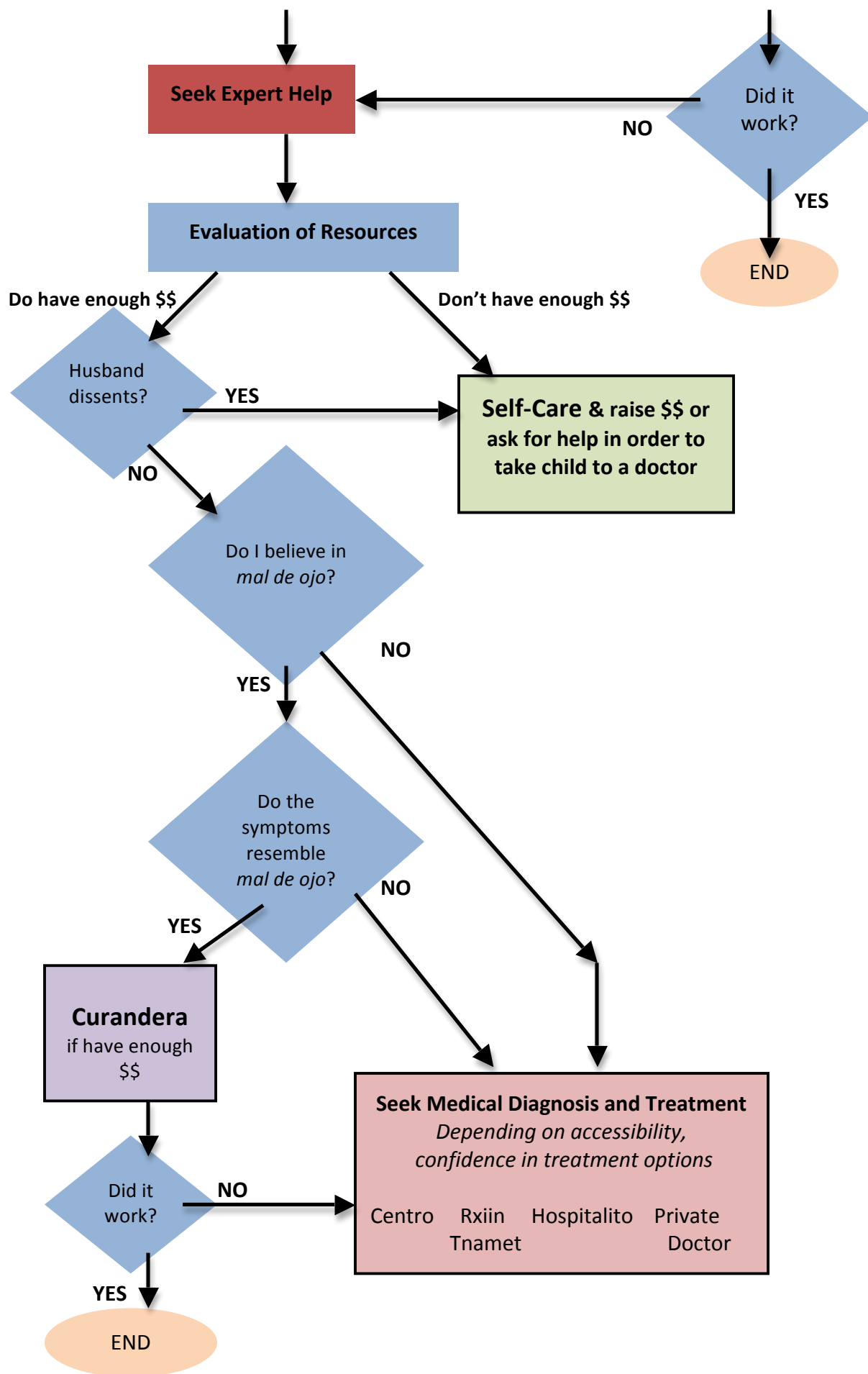
Qualitative data from interviews were recorded during the interviews on paper-based field notes. Field notes were then recorded into a word processing document, coded, and analyzed via grounded theory.

Additional fieldwork was carried out in January of 2012 in order to test and clarify preliminary results. Data were collected using a questionnaire (see Appendix B) along with participant-observation. The questionnaire consisted of scenarios, both from the interviewee's perspective and from the perspective of the third person. Mixed purposive sampling was again utilized and questionnaires were conducted until data saturation was reached. Sixty-one mothers living in Chukmuk, Pachicaj, Panaj, Panul, Tzanjuyú, and Xechivoy were surveyed.

This study was approved by the University of Pennsylvania's Social and Behavioral Sciences Institutional Review Board.

Figure 5: Decision-Making Model
Illustrating Atiteco Mothers' Cognitive
Process as They Respond to Illness in
Their Children





4. RESULTS

4.1 The First Step: Gauging Severity

The first action mothers in Santiago Atitlán take when their children are ill depends on their perception of the severity of the illness. Once a mother decides that her child's condition is serious, she will want to seek expert help. Many of the mothers that were interviewed did not believe their children had a "serious illness" in retrospect; however, these mothers did seek help at the time because they perceived their children's conditions as serious. Atiteco mothers perceive a certain condition to be serious if:

1) the symptoms are perceived as very strong, "not normal," or complicated.

During preliminary ethnographic data collection, women used the phrases "strong," "too much," "more than normal," or mentioned that a certain symptom had complicated when describing symptoms that they felt were serious and why they sought help. Conversely, women used the terms "common" or "normal" to explain why they did not seek help for a certain illness. In the questionnaires, 54 out of 61 women answered that they would seek expert advice if their child had an illness and the symptoms were very strong.

2) the mother recognizes certain symptoms as a sign that the child requires medical attention.

Some of the women interviewed answered with specific symptoms when they were asked why they thought their children's sicknesses were serious or why they had sought help. The main symptoms that these women recognized as requiring medical attention were fever and not wanting to breastfeed or eat. Other symptoms recognized as dangerous included diarrhea, vomiting, and sleeping too much. These symptoms are consistent with the "signs of danger" posted on the walls of the Centro de Salud and Rx'iin Tn'amit to warn mothers (See Page 31).

Of the 61 mothers who were surveyed and asked what they would do if their child showed a sign of danger, 50 answered that they would seek a doctor. Five mothers said they would seek help from a *curandera*, but if the *curandera* did not cure the child or if they had enough money, they would seek a doctor. Two said they would not know what to do in such a situation and would ask around for advice, which most likely means they would look for expert advice. Only the 4 remaining women would first attempt to cure their child at home.

3) *the mother does not recognize the illness.*

Some women expressed that their children had a symptom they did not recognize, and their uncertainty and lack of knowledge on what to give their children drove them to seek expert help. The symptoms described are uncommon ones such as “yellow eyes” which was later diagnosed as hepatitis, “hurting bones,” or a child not being able to support his head or stand, which was later diagnosed as rickets. When asked in the questionnaire what they would do if the child had a strange illness that they did not recognize, 48 out of 59 responded they would take the child to a doctor. Two of the women said that they would use a *curandera* but would seek a doctor if they had enough money or if the *curandera* did not cure their child. One said it would depend on how badly the child looked due to these strange symptoms. Six of the women said they would not know what to do in such a situation except pray and do everything possible to look for help. These women would probably also look for expert advice. Only two of the women answered that they would attempt to cure the illness at home.

A condition is generally not considered serious if it does not bother the child, and the child can function fine and live with it. For example, one mother explained that her child has had chronic bronchitis since she was born. However, the mother did not look for professional help for her daughter until her daughter experienced a “strong headache” that would not quit for two

months. In this case, the mother did not perceive the chronic bronchitis as serious enough to look for help because her daughter could live with it, however she perceived the headache as serious because it was strong and did not pass.

4.1.1 “*Serious Illnesses*”

Eighteen mothers were asked in their interviews what in their opinion is a “serious illness” in children. Two women responded with highly infectious diseases such as measles and tuberculosis, and both clarified that now these illnesses are not an issue. Their responses represented a larger theme gathered from the interviews regarding the changing nature of the “serious illness” in Santiago Atitlán. Mothers described how they considered infectious diseases such as measles, whooping cough, chicken pox, and tuberculosis to be serious but thanks to vaccinations these illnesses are no longer a problem. For example, one 73-year-old interviewee said, “Serious illnesses have changed because now there are vaccines. Now, it is considered serious when a baby has diarrhea or is vomiting. Depression, diabetes, and asthma are also really big here right now.” In fact, seven mothers specifically stated that in their opinion diarrhea is a serious illness. Other illnesses mentioned as serious include respiratory illnesses such as bronchitis and pneumonia; *nervios*, or nerves—a folk illness associated with psychological distress; and chronic or terminal diseases such as diabetes, cancer, and AIDS.

However, mothers do not seek expert help simply because their child has one of these “serious illnesses.” First, mothers do not recognize an illness as diabetes, cancer, or AIDS before taking their child to a doctor for diagnosis, so there has to be some other factor that drives them to seek this expert diagnosis. As for diarrhea and respiratory illnesses, which can be recognized, some mothers, as mentioned above, will seek medical attention if they recognize the symptom as one that requires medical attention. However, many mothers believe such illnesses are not

always serious. Therefore, for many women, some other condition must be met for the illnesses to be perceived as serious and needing medical attention.

4.2 Self-Care and Lay Advice

After deciding that they do not perceive their child's condition to be serious, the majority of mothers in Santiago Atitlán treat their children themselves. Mothers will use remedies that they learned from their own mothers and grandparents while growing up. For example, many mothers learned to use herbal remedies to treat certain symptoms. Others learned to use a mix of natural medicines and pharmaceuticals, such as using herbal tea along with aspirin to cure headaches. The remedy for treating a certain condition may differ among mothers depending on what they learned from their families. When a mother is unsure of how to treat an illness in their children, they look to their mothers, their mothers-in-law, the elderly, other mothers, and neighbors—people they have a relationship with and who have had parental experience—for advice. Mothers will also at times ask pharmacists for advice on what to use when they visit the pharmacies to purchase medicines.

There are however mothers who do not feel confident giving their child remedies without expert advice. This loss of confidence in the self and lay advice can be attributed to the increasing availability of doctors. One mother, age 46, described the changing times well:

“No, my children never had a serious illness. Yes, they had fevers and the flu. I used *medicina natural* to cure their fevers—hibiscus tea and tamarinds. I learned this from my mother. And I used acetaminophen for the flu. Here, there was no big hospital, so parents used *medicina natural* to cure their children. Also, back then, people lacked the money to pay for doctors. Now, I have a grandchild, who is two years old. He has not had a serious illness, but he has had fevers. Sometimes, we will use *medicina natural* to cure him, but a lot of the time, his parents will take him to a doctor. These days, people do not use *medicina natural* as often to cure their children and instead rely more on doctors because there *are* doctors now, and people have more money now.”

4.3 Deciding to Seek Expert Help

4.3.1 Driving Factors

Atiteco mothers may be driven to seek expert help despite their confidence in self-care for two main reasons—they are advised to do so and/or they decide that their child's illness is serious. A mother may be advised to seek expert help either by family members or even by faculty in their child's school. For example, one mother said that one of her sons had a problem with his nose since he was young. She did not look for expert help for her son until his school informed her that there was an issue with his breathing and suggested that he see a doctor.

Besides the three instances that a mother would perceive her child's condition as serious stated above, Atiteco mothers would also perceive a certain condition as serious if:

4) *the symptoms do not pass after attempting to treat it at home.*

The main reason an illness is considered serious enough to seek expert help is if after attempting to treat their child's illness at home, the treatments *no le ayudó* (do not help) or if the sickness *no se pasa* (does not pass) or *no se calmó* (is not calmed). Thirty-seven of the women interviewed responded that they sought help for the child because their illness would not pass. Seventeen mothers responded that they knew their child did not have a serious illness because the sickness would pass with the mothers' use of natural medicines and pharmaceuticals. Overall, this factor was mentioned by 50% of the mothers in semi-structured interviews. In the follow-up survey, 46 out of 52 women said they would seek expert help if symptoms did not pass after attempts to treat the illness with medicines. Of the remaining 6 women, 2 said they would seek lay advice, 2 said they would go to pharmacies, 1 would switch to a general herbal tea, and 1 simply stated that she would "look for other ways". These 6 women would most likely also seek expert help if these additional remedies failed to cure their children.

4.3.2 Barriers

The Cost

She kept saying that illnesses “cuesta la mujer (cost the woman).”
- June 30, 2011 Field Notes

Money is a consideration when deciding to seek expert help. Mothers who do not have much money may not seek expert diagnosis despite being advised to or having acknowledged the seriousness of her child's condition. Besides considering the cost of a consultation, mothers must also consider the cost of medicines and travel costs. The biggest grievance that the mothers shared was the lack of medicines at the Centro. Though they depend on the Centro as their governmental health center to provide free care along with free medication, the Centro never seems to have medicines to offer. If they do have medicines in stock, the mothers say that these medicines are cheap ones for simple colds and that the governmental healthcare facilities do not have medicines for serious illnesses. In fact, there was a protest at the Centro de Salud over the lack of medicines near the end of July 2011. Because the Centro does not have medicines, the doctors provide the patients with a prescription, and the patients must buy the necessary medicines at one of the pharmacies in town, which is costly.

Illnesses also cost mothers in other ways such as time spent not working nor taking care of their other children. One mother said that she did not look for help for her baby that was seriously ill because she could not leave her seven other children, who were very little, at home alone—her husband could not watch the children because he works all day. When she was finally able to find the time to seek help, she was too late, and her child died.

When a mother must acknowledge the fact that she cannot seek expert help and treatment, she will continue to depend on self-care. At the same time, many mothers will try to

do what they can to be able to take their child to an expert and purchase medicines. They may ask for help from friends and family to watch their other children. They may also try to raise money by borrowing and selling the *huipils* (traditional Maya shirts) that they have embroidered and other belongings. Unfortunately, sometimes mothers are not able to raise enough money in time, and as a result, their children may succumb to their illnesses.

Familial Barriers—Husbands' Opinions

When asked who in the family makes the decision to seek expert help, Dr. Angel, who works at both the Centro de Salud and Rx'iin Tn'amt, said the majority of the time it is the father. The mother might bring the child to the Centro alone, for example, but the father usually decides that they should or should not go. His statement was corroborated in interviews. In one interview, the husband was present, and he suggested that fathers should also be interviewed as a part of this investigation as they have a significant role in the decision-making process. (Note on methodology: The focus of this research had been on mothers due to the fact that in the majority of Atiteco families, men spend their days outside of the home working while women stay at home taking care of the children and the household.)

In Atiteco families, the father is the one who handles the family's finances. Therefore, if the father does not agree that the child needs expert diagnosis or does not want the child to be taken to an expert due to financial issues, the mother will not have the money to allow her to seek expert help. Besides financial reasons, a father may object to taking their ill child to a doctor, for example, if he holds a negative view of doctors. In such situations, the mother would have to resort to using home remedies. At the same time, the mother may consult a third party to convince her husband to change his opinion, try to raise money so she can take the child anyway, or argue with her husband and even disobey him if she decides the baby's health is more

important than the ramifications of disobeying her husband. However, mothers said that fathers generally worry over the children, too, and fathers were observed accompanying their wives and ill children on visits to the Centro and the Hospitalito.

4.4 Determining Treatment Choice

4.4.1 Is It Mal de Ojo?

Mal de ojo, the evil eye, is a folk illness related to the humoral theory of disease. At times simply viewed as negative energy, *mal de ojo* is considered to be a real disease with systemic manifestations in Santiago Atitlán.

Mal de ojo is commonly experienced by infants. One mother in Santiago Atitlán explained that *mal de ojo* results when a baby is very handsome and someone that is not a family member holds the baby and gives the baby much love and affection when the baby does not want to be held. Others say *mal de ojo* results from inebriated people, pregnant women, or envious people looking at the baby. Often, a negative energy affects the baby when these people look at the baby. Jason Harris found during his fieldwork with the K'iche' Mayans in Santa Catarina Ixtahuacán that this susceptibility is thought to be because the spirits of infants are not as strong as adults' or because babies have cooler spirits that leave them more susceptible to hot outside influences (1996).

Typically, mothers in Santiago Atitlán think that their child has *mal de ojo* when their child is sick. Mothers who do not believe in *mal de ojo* seem to be younger and/or more educated. The symptoms of *mal de ojo* are generally recognized to be the co-appearance of diarrhea, vomiting, and fever. The baby will not stop crying, is not calm, and will stop eating and breastfeeding. However, those mothers that believe in *mal de ojo* may see these symptoms in their child and think it is *mal de ojo* one instance and simply diarrhea the next time and take the

child directly to a doctor. The way mothers distinguish *mal de ojo*'s symptoms from "naturalistic" illness is that diarrhea indicating *mal de ojo* is green and accompanied with white pus leaving the eyes. Or the diarrhea smells like rotten eggs, and the child's eye keeps turning inward. A mother's preliminary diagnosis of *mal de ojo* also depends on whether they believe someone has recently held and looked at the baby in such a way that could cause *mal de ojo*.

When a mother believes her child has *mal de ojo*, the mother needs to treat the child using *curanderas*' remedies, which the people term "*medicina natural*." Though called "*medicina natural*," these remedies often include Western pharmaceuticals along with medicinal plants. If a mother knows a remedy for *mal de ojo*, she will save money by preparing the *medicina natural* herself. When a mother is unsure of a remedy, she will look to her mother, her mother-in-law, the elderly, other mothers, and neighbors—people she has a relationship with and who have had parental experience—for advice. Otherwise, she will seek and pay for the advice of a *curandera*. There are many different remedies for *mal de ojo*. For example, one way to treat *mal de ojo* is to rub an egg against various parts of the baby's body, such as the forehead, chest, and hands. Afterward, the egg is cracked and the liberated yolk will reveal something resembling an eye. Those who believe in *mal de ojo* believe that when mothers take children affected by *mal de ojo* to a doctor, the doctor may cure the physical symptoms but will not be able to cure the ill feelings of the child.

Interestingly, some younger mothers shared that they sought biomedical help for their ill child initially, and then sought help from a *curandera* for *medicina natural* when biomedicine did not work. These younger mothers generally did not know which remedies to use, and they took their children to the Centro first because it is free whereas one must pay a *curandera*.

4.4.2 Choosing a Professional Healthcare Facility—Accessibility

When it comes to choosing among the different biomedical healthcare facilities, the factor of money was mentioned most often in the semi-structured interviews. Due to the importance of time, many women also choose a healthcare resource based on convenience—what is closest. In fact, Dr. Miguel Angel said that there are more patients at these clinics on Fridays because Friday is market day. People from cantons and aldeas farther away can stop by the Centro or Rx'iin Tn'amit as they are at the town center for market day for fresh produce and meats anyway.

If accessibility were the sole or major factor taken into consideration, the Centro would be expected to be the most popular choice for healthcare among Atiteco mothers. Consultations at the Centro are free, and medicines are free if they are available. Also, the central location of the Centro de Salud, and the Puestos de Salud in the farther cantons of Chacaya, Cerro de Oro, and Chukmuk assure that governmental healthcare facilities are accessible to most of the population. The second most often chosen facility should be Rx'iin Tn'amit, as the cost of consultations there and medicines from their pharmacy are low, and it has the same central location as the Centro de Salud. Private doctors and the Hospitalito would not be expected to be chosen as often as they both tend to be more expensive options. The Hospitalito does have a sliding scale system; however, its location is not convenient, as it is about a 40 minute walk from the center of town in the direction of Chukmuk, thus very far from those living in Panabaj, Tzanchaj, and Chacaya. The data gathered from the semi-structured interviews, however, is not consistent with this expected distribution of the first source of professional treatment sought by mothers (Figure 6).

Figure 6: First Source of Professional Treatment Sought by Atiteco Mothers (n = 55)

	Centro de Salud	Rx'iin Tn'amit	Hospitalito	Private Doctor
Number of mothers	30	5	15	5
Percentage	55%	9%	27%	9%

Among the 55 women interviewed who stated that they sought professional help in healing their ill children, the Centro was the most often sought first source of treatment. Few of the women interviewed had utilized private doctors, most likely due to the cost. Despite the accessibility and low cost of Rx'iin Tn'amit, more mothers sought help at the Hospitalito first rather than the clinic. Dr. Miguel Angel shared that Rx'iin Tn'amit does not see many patients. There may be about fifteen patients per day at Rx'iin while the Centro may get about forty patients a day. These results show that accessibility is not the only consideration mothers take into account when choosing among the different healthcare facilities.

4.4.3 Perceptions of the Professional Healthcare Facilities

Different mothers have different opinions as to which professional treatment source in Santiago Atitlán is the most effective and provides the best attention. Their belief in which is the most effective is a product of general community opinion of the different facilities and each mother's personal experiences with these facilities and physicians.

Community Perceptions

- The Centro de Salud

“One time, her daughter was sick at school, and Juana was worried, so she took her to the Puesto [in Chukmuk] at 2:00 P.M. It was closed. The nurse there told Juana to return tomorrow. But Juana insisted that her child was seriously ill, but the nurse would not let her in. The Puesto should be open till 4:00. The nurses there always ask for money, so what should her family do? The nurses will ask for 2-3 Q for consults and money that the family doesn't have for medicines. Thus, she and her husband cannot cure their kids quickly. The husband told me he thinks that the mayor and other government officials do

not want to understand. They do not think the people are talking seriously when they speak of this matter. They think that the people are lying.”- July 16, 2011 Field Notes

Many mothers have negative opinions of the Centro de Salud that deter them from utilizing it. One of the biggest complaints, as stated above, is that the Centro de Salud and the Puestos do not have medicines to offer. Another complaint of the Centro de Salud and the Puestos was about the alleged corruption of the workers there. Sometimes, the doctors or nurses charged them for consultations or for medicines when these should be free. Many mothers believe that the doctors at the Centro are not as experienced or skilled as the doctors at Rx'iin Tn'amit, the Hospitalito, or private doctors. If their child is ill, these mothers may wait to have enough money to take their child someplace other than the Centro. However, this belief is most likely unfounded –the same doctor works at both the Centro and Rx'iin for example.

A number of mothers in Chukmuk had a negative opinion of their Puesto de Salud. The mothers shared that the Puesto does not have a doctor, just two nurses who can see what kinds of illnesses their children have and provide medicines but cannot cure their children. Some mothers shared that the nurses at the Puesto do not treat them well. One mother said that she did not want to go to the Puesto de Salud because sometimes the nurses there scold her.

- *The Hospitalito*

Some women believe that it would be better to take their ill children to the Hospitalito and pay because their medicines are better—the Hospitalito has “good medicines from the United States.” However, generally, the Hospitalito is perceived as being too expensive. The Hospitalito expressed that it is frustrated with the rumors in the community of how expensive the hospital is. Lyn Dickey, treasurer of K'aslimaal and Vice Chair of Amigos Hospitalito Atitlán, explained that there is confusion between how much a service at the Hospitalito costs versus how

much a patient actually has to pay. She believes part of the issue is the beautiful new hospital building, which looks expensive. She says that the Hospitalito must charge patients in order to be sustainable, and they charge what people can afford to pay according to sliding-scale payment plans. However, despite the sliding-scale payment system, the hospital is still not affordable for many women. One woman shared that she had debt at the Hospitalito due to a cesarean that she had and therefore cannot take her child to the Hospitalito. Another woman shared that she wants to take her daughter to the hospital, but the social worker would not approve seeing her daughter cheaply because her youngest daughter is enrolled in the Pueblo a Pueblo program, which is a program that sponsors poor mothers so that their child receives comprehensive medical checkups through age 5. Many had never spoken with a social worker during their visits there. One woman said that she took her child to the Hospitalito at 5:00 p.m., and because the social worker was not there at the time, she had to pay the full cost of the visit. Surprisingly, many of the women interviewed did not even have knowledge of the hospital's sliding-scale system. An informant in the Hospitalito explained that the patients must ask about the sliding scale system to be offered it and that not everyone's socioeconomic condition is evaluated.

Other frustrations with the Hospitalito were directed toward the doctors and the hospital's lack of equipment. Community members dislike the prevalence of foreign doctors and student doctors at the Hospitalito. They expressed their frustration with the language barrier with the foreign doctors. Some believe that these doctors are rude, which may be due to cultural differences rather than the foreign doctors actually treating the patients poorly. The community members are skeptical of student doctors who they feel are practicing medicine and are not yet experts. The community also seems to believe that the Hospitalito lacks necessary equipment. One man shared that he had a sister who used the Hospitalito for a cesarean. However, there was

a complication during the cesarean, and the Hospitalito only had one oxygen machine. His family needed to choose between saving his sister or the baby.

During my time in Santiago Atitlán, a recent event had shaken the community's faith in the Hospitalito. In May of 2011, a well-known man was shot through the neck and rushed to the Hospitalito. On his way there, he was functioning fine and speaking. At the hospital, the staff decided that they were not equipped to fully help the man and that he would have to be sent to the hospital in Sololá; but before doing so, they needed to help the man breathe stably or he would die due to accumulation of blood in his throat during the drive to Sololá. Unfortunately, he died during this operation. The Atitecos believe the Hospitalito killed him, and this event has damaged the Hospitalito's reputation.

These negative conceptions and frustrations with the Hospitalito deter families from seeking help there. Community members state that they are content with the Centro, clinics, and the private doctors that they already have and do not need the Hospitalito. They complain that the Hospitalito costs as much as private doctors, but they believe the care provided is not as good. Even the firefighters, who drive the ambulances, try to take patients all the way to the hospital in Sololá, which is 1.5 hours away, if possible rather than take them to the Hospitalito.

The Importance of Previous Personal Experiences

Past personal experience with a particular healthcare facility also determines whether an Atiteco will utilize the same resource again if a child becomes ill. A positive experience with a healthcare facility will increase the people's faith in that resource whereas negative experiences will build criticism for that facility and encourage the people to turn to different facilities when in need of healthcare. One man I talked to had many praises for the Hospitalito and its doctors. This man had taken his wife to prenatal visits at the Centro de Salud and to the governmental

hospital in Sololá for her labor. Unfortunately, their baby was born dead, and he believes this is because the doctors decided too late to perform a cesarean. He lost faith in governmental healthcare facilities, and the next time his wife was pregnant, they went to prenatal visits at the Hospitalito and also used the Hospitalito for her labor. The Hospitalito successfully performed a cesarean. Also, he was able to talk to the social worker to come up with a sensible repayment plan. If their child is ever ill, this man and his wife will most likely seek help at the Hospitalito.

Another example of the importance of personal experience can be seen in the way Atiteco mothers perceive private doctors. Many Atiteco mothers stated that they were most confident in private doctors because they listen to the patients, spend more time with the patients, and are not rushing around like the doctors in the Hospitalito. They found private doctors more dependable. However, some mothers had a negative experience with “thievish” private doctors who would charge them for diagnostic tests and never carry out the tests. These women would not recommend a private physician.

5. DISCUSSION

5.1 Atiteco Mothers' Help-Seeking Behavior

Atiteco mothers generally follow the hierarchy of resort—they first attempt to treat their children themselves using their knowledge of remedies, seeking advice from lay persons such as family members, neighbors, and friends if their own knowledge of remedies is insufficient. If home remedies do not work or when the illness is determined to be serious, Atiteco mothers will move up the hierarchy of resort to a medical expert. This action suggests that though herbal remedies and general pills are believed to be effective for most illnesses, Atiteco mothers generally believed that physicians were most likely to successfully treat illnesses (while *curanderas* were most likely to successfully treat personalistic, culture-bound illnesses.) The choice to self-treat before seeking medical advice is mainly a cost consideration.

Atiteco mothers' actions coincide with Leyn and Young and Garro's findings that perceived seriousness of the illness, recognition of the illness and knowledge of a remedy, an individual's confidence in a specific treatment option, and the accessibility of a specific treatment option are involved in help-seeking decisions. The results further illustrate that, for Atiteco mothers, the factor of money is a consideration throughout their decision-making process. When an illness is not perceived as serious, Atiteco mothers' actions are ordered by cost, just as Young and Garro had found. Many mothers start with the cheapest treatment choice—a home remedy. Cost is also the main barrier to seeking help from an expert, which is consistent with Schram and Etzel's initial findings. Finally, cost is considered when mothers are choosing among the various sources of professional treatment.

Atiteco mothers' actions are also consistent with the HBM. The factor of perceived severity increases their readiness to seek outside help. Then, each mother's belief about the

effectiveness of various available options along with consideration of any barriers determines her treatment choice. Though perceived severity of an illness increases mothers' readiness to act, it is not a variable considered in choosing a specific source of treatment as Leyn had found in Santa Catarina Ixtahuacán. Both the Centro de Salud and the Hospitalito were used by Atiteco mothers who saw dangerous symptoms or believed that their child had a grave illness. Similarly, both the Centro de Salud and the Hospitalito were used by mothers for illnesses that were not serious or moderately serious. The cases in which perceived severity did seem to determine choice of treatment were when mothers considered their child's illness serious because they did not recognize the illness. These mothers in my sample chose to take their children to hospitals, *curanderas*, or far-away specialists rather than the Centro de Salud or Rx'iin Tn'amit. The reason for this may be that Atitecos share a perception that the doctors at Centro de Salud and Rx'iin Tn'amit are not as knowledgeable of rare, atypical illnesses.

It is important to note that mothers' medical choices are not simply cost-ordered as they also take into account their confidence in the different facilities. It makes sense that many mothers choose not to utilize Rx'iin Tn'amit, which uses the same exact doctors as the Centro de Salud but has a cost. However, many mothers choose to take their children to the Hospitalito or private physicians despite the extra cost. This may be due to perceptions that these doctors are more skilled or have better resources. When mothers believe a certain facility would be the most effective in treating their child, many do not just give up when faced with financial barriers. Instead of allowing cost to hinder them, these mothers will do all they can to raise the money necessary to best help their ill children.

The decision-making model produced (Figure 2) puts the factors mothers take into consideration when choosing a source of treatment into one box because the weight placed on

these factors of cost and confidence differs with each mother. In her article on predicting decision outcomes, Mathews states that anthropologists often assume that there is one standard goal in decision-making studies—such as the goal of being cured. However, this does not reflect reality, which involves families having multiple, often conflicting goals (1987). Unlike Young and Garro, who found that when an illness was considered serious, Tarascan villagers’ decision-making was ordered by “probability of cure” and cost is a less important consideration, Atiteco mothers’ decisions do not seem to be ordered in a standard way. In Santiago Atitlán, the goal of curing one ill child may conflict with the goal of maintaining the welfare of the entire family. Families differ in the way they would prioritize these conflicting goals.

Predicting medical choice among Atiteco mothers is not a simple task. If one were to use this model to predict treatment choice among Atiteco mothers, one would have to understand what the mother and her family would prioritize, their financial situation, and her perceptions of which healthcare resources have the highest probability of cure. If her priority is to cure the child whatever it takes, she will go to the place that she perceives to have the highest probability of cure. If she does not have enough money, she will do her best to raise the money by asking for help, borrowing, or selling her *huipils*. If her priority is overall welfare of her family, and using the healthcare resource she believes has the highest probability of cure will compromise that priority, she will most likely take her child to the Centro. If she has a very bad perception of the Centro, she may perhaps choose Rxiiin, which is the next least costly option, or the Hospitalito if she knows of the sliding scale system, or perhaps not take her child to a doctor at all but continue to depend on herbal remedies and over-the-counter medicines.

5.2 Navigating a Pluralistic Health System

Atiteco mothers’ decisions and actions in seeking to treat their ill children reflect how

they are making sense of the coexistence of traditional medicine and biomedicine in Santiago Atitlán. Mothers are combining the two disparate health systems in their quest to cure, as can be seen in the way they use herbal remedies initially and then look to biomedicine when these herbal remedies do not cure their children. Many mothers' home remedies include both herbal remedies and Western pharmaceuticals. This could be due to a belief that supplementing herbal remedies with Western pharmaceuticals has a stronger, or complementary, effect.

The role of *curanderas* has been significantly reduced to treating culture-bound illnesses such as *mal de ojo* whereas biomedicine has become the system that is sought after for all other serious illnesses. The encroachment of biomedicine has also changed the way mothers respond to *mal de ojo*. Upon recognizing an illness to be *mal de ojo*, mothers will try to cure the symptoms using *medicina natural* and *curanderas* and then seek a doctor if their treatments do not work. That some mothers seek expert help from both a doctor and a *curandera* truly reveals the syncretism of biomedicine and traditional medicine.

Mothers' conception of disease seems to be changing due to the mixture of biomedical thought. For example, an increasing understanding of the biomedical concept of disease, or germ theory, is changing the way mothers understand the symptoms of diarrhea and vomiting. Maria, a store owner in Chukmuk, said, "People here think diarrhea is *mal de ojo*. In my opinion, diarrhea occurs when children do not wash their hands, or when they eat food that has not been prepared well."

Though the Atitecos utilize Western medicine, many still prefer to use herbal remedies. There is a trust that these women have in their herbal remedies. Some women believe that their children may not function well when they take in the chemicals of Western medicine. However, the younger generation of mothers is not as reliant on home remedies overall as doctors have

become more accessible in Santiago Atitlán. These younger mothers generally did not know which remedies to use. This is consistent with Yukes's findings that the younger generation in Nahualá seems to prefer pharmaceutical-based biomedicine due to its convenience and increasing availability and because they do not know as much about herbal medicine. Overall, these findings support Adams and Hawkings' theory that the syncretism of traditional and modern health systems can be attributed to the fact that both are available in an incomplete state.

5.3 Applying the Results

An understanding of when and where Atiteco mothers seek help for children's illness will benefit medical professionals serving the Santiago Atitlán community.

5.3.1 Altering Help-Seeking Behavior

Knowing how Atiteco mothers decide an illness is serious enough to seek medical help, health workers in Santiago should describe symptoms of serious children's illnesses as "not normal" and as requiring medical attention when educating mothers as this is how Atiteco mothers themselves gauge severity. Explaining symptoms in these terms may alter Atiteco mothers' help-seeking behavior so that they seek expert help immediately when their child exhibits certain warning symptoms; at the same time, such a modification in help-seeking behavior would be consistent with their decision-making process.

In order to make mothers more aware of serious symptoms in infants, the Centro de Salud and Rx'iin Tn'amit already have posters depicting these warning signs and explaining what mothers should do:

At the Centro de Salud, on the wall in the general waiting room is a big poster by the Ministry of Public Health:

"If the baby presents one or more of these signs of danger of dying.

- Is really little
- Cannot breastfeed or drink liquids
- Vomits everything
- Has attacks of convulsions
- Faints or has trouble breathing

- When pinching the baby's skin at its belly, it returns to its place slowly
Go RAPIDLY to CAP or the hospital.”

Rx'iin Tn'amit has a poster in its education room that says:

“Promoting a healthy baby by recognizing the signs of danger in the baby.

- Breathes as if tired
- Does not want to breastfeed
- Vomits much and has yellow skin
- Has a red and inflamed umbilical cord
- If of low weight
- Sleeps a lot and does not move
- Has a fever
- Has a lot of diarrhea and is vomiting
- Has attacks

If your baby presents these signs of danger, Hurry!, go to the closest establishment of health.”

- June 17, 2011 Field Notes

However, these posters are in Spanish and therefore by themselves are ineffective in conveying this information to the many illiterate mothers, or mothers who only speak Tz'utujil, in town.

One mother shared that mothers' lack of knowledge of Spanish in Santiago Atitlán hurts them as it prevents them from knowing more about illnesses. It is necessary that health care workers at each of these healthcare facilities explain the information on these posters to mothers in Tz'utujil.

5.3.2 Addressing Barriers to Seeking Care

One should not alter mothers' help-seeking behavior while ignoring the barriers that deter mothers from actually being able to seek help. One structural barrier Atitecos are concerned with is how expensive the Hospitalito is—the Hospitalito is perceived to be so costly that many women would rather go to the government hospital in Sololá that is two hours away. The community feels that the Hospitalito is not there to help them when to help and serve this community was the main reason why the Hospitalito was founded in the first place. I realized that many mothers did not know about the Hospitalito's social worker or the sliding scale system. In fact, those mothers who knew about the sliding scale system tended to be of a higher SES. The Hospitalito needs to better publicize the affordability of their services. If what the

informant said is true—that patients must ask about the sliding scale system in order to be offered it— the Hospitalito may be contributing to structural violence against those who need aid the most. Also, some patients may know about the social worker and the hospital’s payment system but not ask to see a social worker due to feelings of pride or shame. The Hospitalito must take the initiative and have the social worker talk to each patient and evaluate each patient’s socioeconomic condition so that everyone’s needs are properly addressed.

The Hospitalito also needs to figure out how to approach debt. Besides the fact that families who are in debt there already are deterred from using its services again when needed, the notion of indebtedness is a particularly uncomfortable feeling in this community. The idea of owing anything to an authority figure recalls the feelings of being subjugated during the Guatemalan Civil War (1960-1996), during which the town was a site of extensive military control and Atitecos experienced violence and tragedy. During the war, Atitecos regularly suffered at the hands of the Army and the guerilla forces. Debt evokes personal memories of family, neighbors, and friends disappearing, being kidnapped by authority figures under the auspices of arrest. To be indebted means to fear having one’s property seized or being arrested should one not be able to pay off one’s debt, which is likely, as it is difficult to earn money in the *pueblo* (Springs 2010). A previous study on this matter recommends that if an Atiteco must pay a large sum which he cannot pay at the moment, the provider should avoid the negative connotations associated with indebtedness and instead describe the payment system to be one where he pays “little by little” (*poco a poco*), which has a different, more positive reaction among Atitecos (Springs 2010).

As for the Centro de Salud, the major deterrent to seeking care there is the lack of medicines. Though this structural issue will, admittedly, be difficult to address, more attention

should be paid to improving the situation. Medical professionals in Santiago should advocate on behalf of their patient population. The Guatemala government and its health service administrators should be encouraged to make an effort to set aside some of their budget to ensure that medicines are more accessible for the families in Guatemala struggling with poverty and dependent on free governmental health services for their well-being. As resources are limited, perhaps, the government could focus on at least supplying their Centros de Salud with the most commonly solicited medicines.

5.3.3 Recognizing Mal de Ojo

Biomedicine does not recognize *mal de ojo* due to its folk nature and non-scientific etiology, but it is an illness that is prevalent in Santiago and has led to the death of the infants of a number of mothers that I interviewed. Instead of dismissing *mal de ojo*, medical practitioners should collaborate with *curanderas* to ensure that children do not become gravely ill or die of *mal de ojo*. It can be seen from the results that Atiteco mothers who believe in *mal de ojo* believe that when they take children affected by *mal de ojo* to a doctor, the doctor may cure the physical symptoms but will not be able to cure the ill feelings of the child. Knowing this information, doctors and *curanderas* could work together to encourage mothers to seek medical attention for *mal de ojo* immediately to quickly calm the vomiting, diarrhea, and fever and then seek a *curandera* to cure the child of *mal de ojo*. There is precedent to collaboration between the biomedical and folk sector in Santiago Atitlán as the doctors of the Hospitalito, Rx'iin Tn'amt, and the Centro currently collaborate with *comadronas* (traditional birth attendants) in improving maternal health outcomes. Recognizing and addressing *mal de ojo* in this way would be more effective and respectful of the Tz'utujil culture than medical practitioners attempting to convince

Atitecos that *mal de ojo* can be explained by germ theory and requires medical attention like other diarrheal illnesses.

5.4 Limitations and Future Research

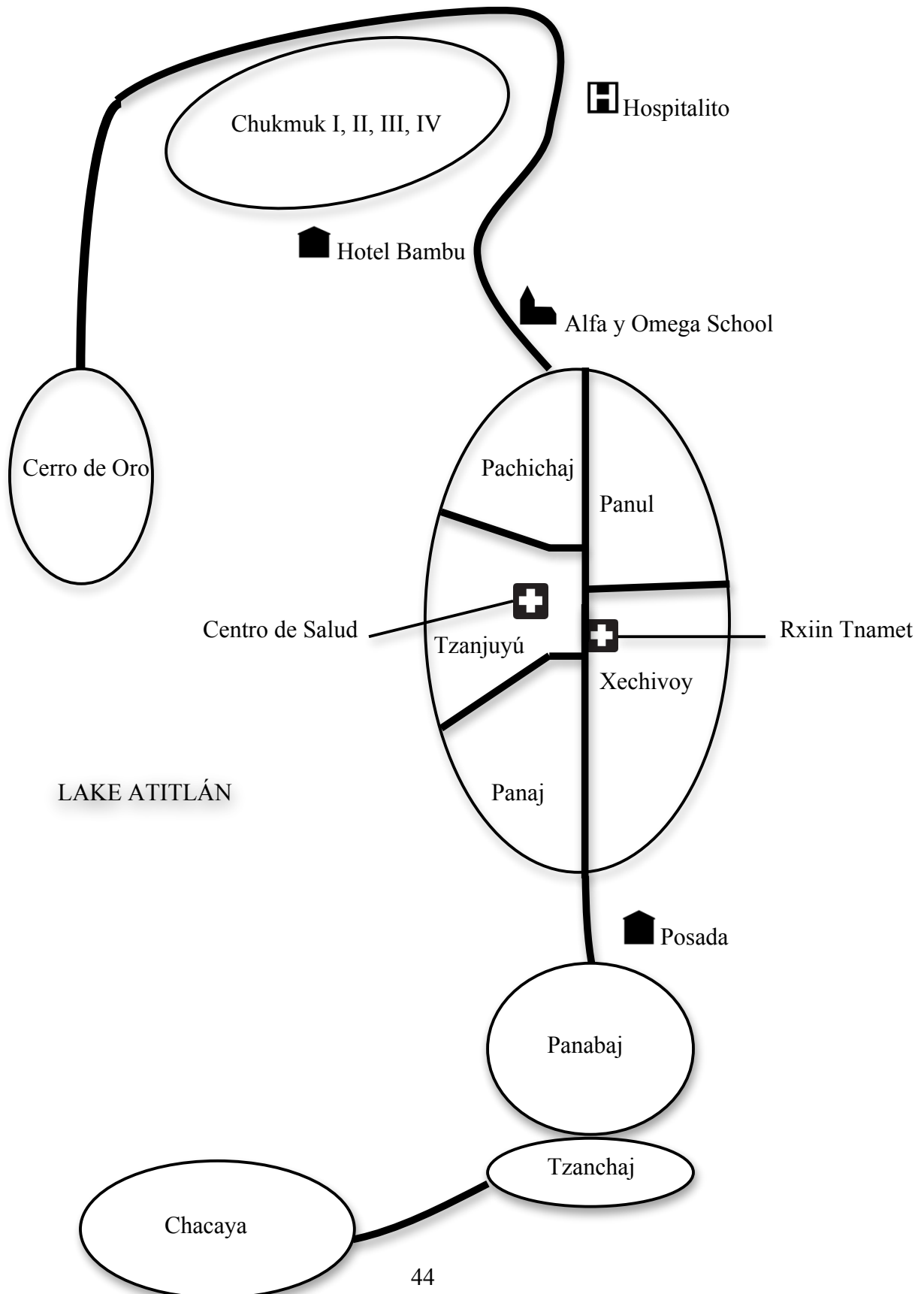
Though I was able to accomplish a lot for this study with my limited time at the site, this study does lack participant-observation involving *curanderas* and private doctors. Such data would contribute a lot to understanding when mothers seek help with these particular experts. I must also acknowledge the difficulty I had with the language barrier, both the Spanish and the Tz'utujil, as I conducted my interviews. My translators admitted that they found it particularly difficult to translate the mothers' concepts of the folk medical system, including *curandera* use and *mal de ojo*, into Spanish and to explain them in a way that I as a foreigner would be able to understand. Lastly, the decision-making chart I was able to construct from my results is certainly not exhaustive. More research—how factors such as age and education may modify help-seeking behavior, for instance—can be conducted to fill up this chart and have an even deeper understanding of how Atiteco mothers respond to illness in their children.

ACKNOWLEDGEMENTS

This research was made possible by grants from the University of Pennsylvania's International Internship Program and the Office of the Provost for the Guatemala Health Initiative, the Pincus-Magaziner Family Undergraduate Research and Travel Fund, and the Gutmann-Doyle Research Opportunities Fund. Special thanks to Dr. Fran Barg, my thesis advisor, for her guidance and mentorship, and to Doña Luz, Lía, Wendi, and the Sojuel family for their friendship, assistance, and invaluable insight into life in Santiago Atitlán.

APPENDICES

Appendix A: Layout of Santiago Atitlán



Appendix B: Questionnaire

1. There is a mother who lives here in Santiago. Her name is Maria. If Maria has a young child that is sick, what is the first action that Maria will take to cure him?
Hay una madre que vive aquí en Santiago. Ella se llama María. Si María tiene un hijo chiquito que está enfermo, cuál es la primera acción que toma María para curarlo?
2. Maria tried to use natural medicine and pills but they did not work. What will Maria do now?
María trató a usar medicina natural y pastillas pero no se calmó. Qué va a hacer María ahora?
3. If a child is sick, and the mother does not know what natural medicine to use, what does she do?
Si un niño está enfermo, y la madre no sabe que medicina a usar para curarlo, qué haría la madre?
4. If your child had a sickness very strong, not normal, what would you do?
Si tu niño tuviera una enfermedad muy fuerte fuerte, más que normal, qué harías?
5. If your child had a sickness and you recognized a dangerous symptom, what would you do?
Si tu niño tuviera una enfermedad y reconoces un síntoma peligroso, qué harías?
6. If your child had a sickness and you did not recognize the illness, what would you do?
Si tu niño tuviera una enfermedad y no reconoces la enfermedad (era muy extraño), qué harías?
7. If advised to seek professional help by family, friends, neighbors, teachers, what would a mother do?
Si otras personas como familiares, amigos, vecinos, maestros en la escuela dicen a una madre que su niño debe ser llevado al medico, qué haría la madre?
8. If a mother wants to get expert help, but she does not have money, what will the mother do?
Si una madre quiere llevar su niño a un experto, pero no tiene dinero, qué haría la madre?
9. If a mother wants to get expert help, but her husband does not want her to or disagrees that expert help is necessary, what will the mother do?
Si una madre quiere llevar su niño a un experto, pero su esposo no lo quiere o no está de acuerdo que necesita un experto, qué haría la madre?
10. In your opinion, which healthcare resource is the most effective? (Why?)
En tu opinion, cual recurso de salud es lo mas efectivo? Por qué?
11. Maria thinks the _____ / Hospitalito is the most effective/ has the highest probability of cure. Unfortunately, she and her family do not have much money. And she needs to consider her three other children. In this situation, what will Maria do?

María piensa que _____ / Hospitalito es el recurso de salud mas efectivo.
Desafortunadamente, ella y su familia no tiene mucho dinero. Y ella necesita pensar de y
cuidar de tres otros hijos. En esta situación difícil, qué haría María?

REFERENCES CITED

- Adams, Walter Randolph, and John Palmer Hawkins, eds.
 2007 Healthcare in Maya Guatemala: Confronting Medical Pluralism in a Developing Country. Norman: University of Oklahoma Press.
- Bernard, Harvey Russell
 2011 Research Methods in Anthropology: Qualitative and Quantitative Approaches. 5th edition. Lanham: Altamira Press.
- Brown, Peter J., and Ron Barrett
 2010 Understanding and Applying Medical Anthropology. 2nd edition. New York: McGraw Hill.
- Carlsen, Robert S., and Martin Prechtel
 1994 Walking on Two Legs: Shamanism in Santiago Atitlán, Guatemala. *In* Ancient Traditions: Shamanism in Central Asia and the Americas, ed. Gary Seaman and Jane S. Day. Pp. 77-101. Niwot: University Press of Colorado.
- EPSUM
 2009 Diagnóstico del municipio de Santiago Atitlán, Municipalidad de Santiago Atitlán Cantón Tzanjuyú, Santiago Atitlán, Sololá.
- DeWalt, Kathleen Musante
 1977 The Illnesses No Longer Understand: Changing Concepts of Health and Curing in a Rural Mexican Community. *Medical Anthropology Newsletter* 8(2):5-11.
- Foster, George M.
 1976. Disease Etiologies in Non-Western Medical Systems. *American Anthropologist* 78(4):773-782.
- Garro, Linda C.
 1998 On the Rationality of Decision-Making Studies: Part 1: Decision Models of Treatment Choice. *Medical Anthropology Quarterly* 12(3):319-340.
- Gradilla, Melissa
 2011 Comparing Childbirth Practices: Connections, Variations, and Conflicts in Traditional and Biomedical Obstetric Care in Santiago Atitlán, Guatemala. Senior Thesis, Department of Anthropology, University of Pennsylvania.
- Harris, Jason
 1996 Someone is Making You Sick: Conceptions of Disease in Santa Catarina Ixtahuacán. *In* Healthcare in Maya Guatemala: Confronting Medical Pluralism in a Developing Country. Walter R. Adams and John P. Hawkins, eds. Pp. 27-43. Norman: University of Oklahoma Press.
- Kirscht, John P.
 1988 The Health Belief Model and Predictions of Health Actions. *In* Health Behavior. David S. Gochman, ed. Pp. 27-41. New York: Plenum Press.
- Leyn, Jennifer
 1999 The Sickness Was Too Strong: Medical Choice in Santa Catarina Ixtahuacán. *In* Healthcare in Maya Guatemala: Confronting Medical Pluralism in a Developing Country. Walter R. Adams and John P. Hawkins, eds. Pp. 100-122. Norman: University of Oklahoma Press.
- Lipp, Frank J.

- 2001 Southern Mexican and Guatemalan Shamans. *In* Mesoamerican Healers. Huber, Brad R. and Alan R. Sandstrom, eds. Pp. 95-116. Austin: University of Texas Press.
- Mathews, Holly F.
1987 Predicting Decision Outcomes: Have We Put the Cart before the Horse in Anthropological Studies of Decision Making. *Human Organization* 46:54-61.
- McGuinness, Cara
2009 'Bridges': Improving Birth Outcomes and Uniting Traditional and Biomedical Approaches to Health in Santiago Atitlán, Guatemala. Senior Thesis, Department of Anthropology, University of Pennsylvania.
- Patton, Michael Q.
1990 Qualitative Evaluation and Research Methods. 2nd edition. Newbury Park: Sage Publications.
- Rosenstock, Irwin M.
2005 Why People Use Health Services. *The Milbank Quarterly* 83(4).
- Sáenz, Luz María, and George M. Foster
2001 Curers and Their Cures in Colonial New Spain and Guatemala: The Spanish Component. *In* Mesoamerican Healers. Huber, Brad R. and Alan R. Sandstrom, eds. Pp. 19-46. Austin: University of Texas Press.
- Schram, Justin, and Nancy Etzel
2005 Assessing Community Health in a Tz'tujil Maya Village upon the Reconstruction of Hospitalito Atitlán. Report. University of Pennsylvania, Guatemala Health Initiative.
- Springs, David
2010 In the Context of Survival: The Impact of the Political-Economy of Santiago Atitlán On Stove Type Choice. Senior Thesis. Department of Anthropology, University of Pennsylvania.
- Strecher, Victor J., and Irwin M. Rosenstock
1997 The Health Belief Model. *In* Cambridge Handbook of Psychology, Health, and Medicine. Andrew Baum, Stanton Newman, John Weinman, Robert West, and Chris McManus. Pp. 113-121. Cambridge: Cambridge University Press.
- World Health Organization
2009 World Health Statistics 2009. Geneva: WHO Press.
- Yol, Raúl Antonio Hernández
2008 Costos y Rentabilidad de Unidades Turísticas (Hotelería). Report, Department of Economics, University of San Carlos of Guatemala.
- Yukes, Jolene
1997 No One Wants to Become a Healer: Herbal Medicine and Ethnobotanical Knowledge in Nahualá. *In* Healthcare in Maya Guatemala: Confronting Medical Pluralism in a Developing Country. Walter R. Adams and John P. Hawkins, eds. Pp. 44-68. Norman: University of Oklahoma Press.
- Young, James Clay, and Linda C. Garro.
1981 Medical Choice in a Mexican Village. New Brunswick: Rutgers University Press.