“DOES YOUR THROAT HURT MORE IN THE MORNING OR THROUGHOUT THE DAY?” “YES.”: INTERCULTURAL MEDICAL DISCOURSE

by

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ABSTRACT

"DOES YOUR THROAT HURT MORE IN THE MORNING OR THROUGHOUT THE DAY?" "YES.": INTERCULTURAL MEDICAL DISCOURSE

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An increasing number of immigrants to the United States do not use English as their first, or even second, language. Members of the medical community who treats such patients often do not speak the range of home languages of their patients. As a result of the absence of a common language, many patients are forced to communicate the best they can with their physicians in English. This study focuses the interactions of non-native English speaking patients with their doctors when interpreters were unavailable.

Interactions between health care providers and non-native English speaking patients at a university health clinic were videotaped during routine visits. The patients and providers were then asked to rate their comprehension and perceived comprehension of their co-interlocutor after the medical interview was complete. The

patients were asked an additional series of questions requiring them to recall certain parts of the interview such as the cause of their illness, the diagnosis, and the treatment prescribed. The interviews, as well as the patients' debriefing answers, were viewed and the comprehension of the participants rated by a research assistant from the School of Nursing. The primary researcher viewed the interviews and identified, counted, and classified the different types of misunderstandings.

The results of the study show that numerous misunderstandings can occur during a medical interview, despite patients and providers continuing to rate comprehension at a higher level. The new category of a "double covert" misunderstanding is proposed to account for the fact that patients rate their own comprehension as high, but have difficulty accurately recalling the cause of their disease or the treatment regimen. The data reveal that patients believe they completely understand what has been said during the medical interview even as numerous misunderstandings can be identified in the transcripts and debriefings. The research assistant, acting as a third party observer, was able to validate the need for more clarification of the diagnosis and treatments of illness. In the assistant's rating of the patient's comprehension, the rating dropped by nearly 50% between the viewing of the medical interview and the patient debriefing.

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INTRODUCTION

Lia Lee, a daughter of Hmong immigrants had her first epileptic seizure at the slamming of a door when she was only 3 months old. Over the next few months she had at least 20 more seizures until her parents became concerned enough to take her to the emergency room at Merced Community Medical Center in California. These visits became routine for the family who would frequent the same emergency room dozens of times every year over the next few years. Although the doctors prescribed numerous drug regimens, her parents, illiterate even in their own language, only sporadically gave the medications to Lia, citing that the epilepsy was actually her body being caught by a spirit, which made her comparable to royalty in their culture. Her parents sent off for alternative medicines from Southeast Asia and even changed the child's name to fool the evil spirits, a plan that her mother says did not work because the doctors at Merced insisted on calling her Lia. Despite their greatest efforts, the dedicated doctors at Merced could not convince Lia's well-meaning parents to adhere to the prescribed drug regimen. At the age of four, Lia suffered a massive seizure that put her in a vegetative state where she remains today at the age of 23 (Fadiman 1997, Underwood and Adler 2005).

1.1 What is the problem being addressed?

Despite increasing awareness of diverse health beliefs in the United States and around the world, studies involving the preparation of medical residents indicate that the medical community has been unable to keep up with the ever-growing immigrant population (Ghosh 2004, Bond et al. 2001, Fuller 2003). Almost 20% of the American population now speaks a language other than English at home (U.S. Census 2004 American Community Survey). Furthermore, studies have shown that doctors and patients already speak what resembles different languages in the medical interview among common language speakers. While doctors want to speak of a *disease* that is a physiological process, patients prefer to speak of an *illness* that disturbs the ins and outs of their daily life (Mishler 1984, Carrillo, Green and Betancourt 1999).

Physicians often assert a certain amount of control over their patients, constantly working to keep them on track with their goals for the interview: identifying and treating the physiological problem. This type of interaction between physicians and patients in the clinical setting does not allow much time or opportunity for the patient to explain what he is feeling or expecting to receive from the medical encounter. However, it has been shown that patients generally have a higher satisfaction rate when their expectations are met in the medical interview (Peck 2002). A higher satisfaction rate also means a higher rate of adherence to the treatment regimen prescribed. If the patient feels as if he has been a part of the decision process during the medical interview, his individual needs being taken into account, he will be more inclined to follow the

treatment plan prescribed than a patient who believes that he was not included in the decision making (Ferguson and Candib, 2002).

Health care providers may find that they do not have the time to address each individual patient's every need and concern. Providers increasingly complain that they do not have enough time with their patients due to managed care and other time restrictions set by the clinic or hospital in which they work. Managed care has placed limits on the amount of time that providers can spend with patients. It is often the clarification and assurance of understanding that suffers from these standards (Davidson 1999). Doctors have also reported that they are underprepared for dealing with sociocultural issues that arise when they see patients. Not only have they not been adequately prepared in medical school, but after they begin to see patients, they do not have the time with the patient to work through these issues and identify potential problems that may arise during the interaction. Often these issues include a mistrust of the US medical system or religious beliefs that do not agree with the diagnosis or treatment (Weismann 2005).

There have been studies that look at varied types of interactions between physicians and patients in different medical settings. These studies do not specifically look at the patient who comes from a cultural background different from that of the physician. Studies focused on the cultural and language diversity of the patient and provider are mostly centered around the role of the interpreter in medical discourse.

Studies on the medical interview using interpreters report disturbing facts about the role that the interpreter takes on in the medical interview. Only about a third of the

questions asked by patients are actually passed on to the doctor and are generally answered directly by the interpreter (Davidson 1999). Oftentimes the medical interpreter will aid in both the examination and diagnosis. Furthermore, Davidson reports that of those patients needing interpreters only about one third of them actually receive interpreter services (1999). The results of his study are similar to those reported by Ferguson and Candib which states that patients who used ad hoc interpreters or who went without an interpreter when they need one indicated "providers were less friendly, less respectful, and less concerned." For patients needing an interpreter but not using one, the findings revealed "increased dissatisfaction with the time spent with the provider and the interpersonal aspects of care" (2002:354). These are the patients who have yet to be observed during interactions with their physicians.

With the growing population of immigrants to the United States and the lack of qualified interpreters to accommodate them, we need to know more about what happens when these patients interact with their physicians in order to provide increased satisfaction for all participants of the interview. By learning more about their discourse patterns and the misunderstandings that frequently occur, a new discourse structure can be proposed that will incorporate the beliefs of the patients and their expectations into the medical interview. Until now, there has been a lack of research that attempts to quantify the comprehension of the patient following the medical interview. This study quantifies the comprehension of the patient through a short interview and survey after they have met with the physician.

1.2 Why a linguistic study?

The purpose of this ethnographic study is to identify and describe the misunderstandings that occur between health care providers and patients during the medical interview. This study offers two methods of analysis, qualitative and quantitative, in order to gain the necessary perspective and depth of these misunderstandings. The qualitative analysis gives insight into the discourse by examining transcripts of the medical interview and obtaining a closer look at the language used between the two participants involved: the patient and the provider. By identifying specific misunderstandings that occurred through examination of the transcripts, specific indicators of misunderstandings could be identified and brought to the attention of the providers.

The quantitative analysis examines the discourse and the misunderstandings through the use of numerical data. The statistics used here help quantify the patients' comprehension and point directly to exactly which areas of the discourse are still in need of repair. This crucial tool gives information on misunderstandings that may be unseen and helps to direct the focus to specific areas of the discourse that need repair. In this case the cause of the illness and the explanation of the treatment regimen pose the greatest problems for patient comprehension.

The misunderstandings that were noticeable through analysis of the transcript alone are labeled as "overt" misunderstandings. Those that were only discovered after the patients were unable to accurately recall certain aspects of the medical interview are labeled as "covert" misunderstandings. Covert misunderstandings are not noticeable by

examining the medical interview alone. Rather, they are hidden in the minds of the patients and only brought to light when the patients are asked to recall specific aspects of the medical interview.

A third category of misunderstandings emerged and has been classified over the course of this study. "Double Covert" misunderstandings as they have been named here refer to those misunderstandings that are unknown to both the patients and the providers. Double Covert misunderstandings are identified when patients rate their comprehension as high and are unable to recall specific details of their medical interview, implying that the patients are unaware of their miscomprehension. The process of identifying double covert misunderstandings required a combination of both qualitative and quantitative analyses.

In selecting a patient population, this study examines a population that is largely unnoticed in the field of medical research: the limited English proficiency patient. Although the patients who participated in the study were mainly non-native speakers of English, the study took place in a clinic in which interpreter services were not available to the patients. Therefore, patients were forced to communicate in English whether their English was adequate for medical communication or not.

Another unique quality of the non-native English speaking patients is their identification with two languages and cultures. Due to the increase of immigrants in the United States over the last 25 years from non-English speaking countries, today the US has many second and third generation children of immigrants in the population. These patients tend to have English fluency despite the fact that many of them do not learn

English as their first language at home. Furthermore, these patients are often still quite attached to their native culture as it remains a large part of their family life. Although these patients may have the language skills necessary to communicate with the providers, their native cultures can still be a barrier to their fluency and comprehension of the medical interview.

1.3 Summary

This study meets the needs of a previously unaddressed population in the medical community. The patient with limited English proficiency who comes from a varied and rich cultural background of health beliefs poses a complex and difficult problem for providers in the United States. The mixed methodology used was able to approach these variables in a way that provided comprehensive results for the study. Based on both the qualitative and quantitative analyses, not only overt and covert misunderstandings were discovered; the data led to the discovery of a third category of misunderstandings, the double covert, which impacts the comprehension and satisfaction of both the provider and the patient. The results of this study imply the necessity of a change in the discourse used in the medical interview to incorporate more open-ended questions and elicitation of recall by the patients. An increased awareness of the challenges and sensitivity to the potential misunderstandings will also be critical on the part of each participant in order for the interview to flow with fluency and comprehension.

The next chapter will be a review of literature relevant to the topic, followed by a chapter describing the methodology used in this study. Chapter Four will reveal the

results of the study while Chapter Five will discuss these results. The conclusion will address both the implications and limitations of this study as well as some directions for future research.

CHAPTER 2

REVIEW OF LITERATURE

The research in this study falls at the crossroads of a number of different disciplines. An in-depth look at medical communication revealed more about how doctors and patients communicate with each other even when coming from similar linguistic and cultural backgrounds. Examining studies in cultural anthropology, particularly those addressing medicinal beliefs of particular cultures helped to provide a better understanding of where these patients are coming from and what presuppositions they bring with them when they enter the medical interview. There are studies that have already been done that attempt to address the intercultural medical interview from a number of diverse perspectives including medical interpreters. Exploring previous research in the area of intercultural medical communication allowed me to see what had already been done in this area and where the gaps are for a linguistic study addressing these issues. Accordingly, this chapter will be presented as four sections. 2.1 looks research in the area of medical communication, Section 2.2 looks at the way culture affects the beliefs one has about health, illness, and the body, Section 2.3 looks at studies that have been done in the area of intercultural medical communication and 2.4 concludes with the research questions.

2.1 Medical Communication

Many studies have recently shown that physicians and their patients are operating in an asymmetrical relationship, as they are rarely on the same wavelength in the medical interview.

2.1.1 The Voice of Medicine vs. The Voice of the Patient

Mishler defines the two different wavelengths on which they operate as using two different voices. He describes the physicians as working under a "voice of medicine" wherein they decide what is appropriate to be discussed and attended to in the medical interview (1984:95). The patients, on the other hand, operate under a "voice of the lifeworld," in which they endeavor to refer to the social and personal contexts of their problems (Mishler 1984:95). Physicians are quick to repair this voice of the patient and get the interview back on track or focused on the voice of the physician. Mishler explains that "physicians are viewed as the collectors and analyzers of technical information elicited from patients. A patient is, ideally, a passive object responding to the stimuli of a physician's queries" (1984:10). If the patient is merely present to respond to the queries of the physician, an opportunity for the patient to explain his thoughts and expectations will be rare.

Before Mishler proposed the idea of the two voices in medicine, anthropologist Eisenberg had already created a distinction between the patients' and the providers' perceptions explaining that patients suffer from "illnesses" and "doctors diagnose and treat 'diseases.' (1977:9) He defined illnesses as "experiences of discontinuities in states of being and perceived role performances." In other words, to a patient, an illness is a

change in the way that they feel and describes how their life is affected on a daily level by this illness from which they are suffering. They are "*experiences* of disvalued changes in the states of being and in social function" (Eisenberg 1977:11). Diseases, on the other hand, "in the scientific paradigm of modern medicine, are *abnormalities* in the function and/or structure of body organs and systems (1977: 11)." Instead of examining and treating the patient's experience, which may be affected by the illness, the physician is looking for a physiological abnormality that can leave the patient's illness untreated if it doesn't properly coincide with a particular medical disease. Illness and disease as defined here by Eisenberg, "do not stand in a one-to-one relationship (1977:11)." Instead of allowing the patient's description of their illness to guide diagnosis and treatment, the disease process guides the model that is used in medicine to determine "the data that physicians gather, inform the ways in which 'facts' are integrated into a diagnosis and circumscribe the boundaries of interventions designed as therapeutic "(p. 10). When physicians dismiss illness because an ascertainable 'disease' is absent, they fail to meet their socially assigned responsibility" (1977:9). Eisenberg called for a reintegration of 'scientific' and 'social' concepts of disease and illness and insisted that this must become the basis for medical care. This laid the groundwork for the "lifeworlds" to emerge as social scientists continued to look at the way that these diverse approaches to the illness and disease were approached during the medical interview itself.

2.1.2 Patient-Centered Care

In the late 1980s and into the 1990s, researchers began to focus on the concept of patient-centered care as a solution for the problems facing doctor-patient communication. The patient centered model counters the more popular and commonly practiced disease-centered or physician-centered model in which providers pursue their own agenda without attempting to understand or incorporate the patient's agenda into the medical interview. In 1989, a group of medical and social science researchers led by Joseph Levenstein developed a resource for health car providers comparing disease-centered and patient-centered care.

Levenstein's group gives a textbook style summary on patient-centered clinical interviewing explaining the importance and how physicians can make it work in their own practices. They describe the essence of a patient-centered interview: " the physician using the patient centered method allows the patient to guide the interview...by using open, nondirective, facilitative verbal (and nonverbal) behavior" as being able to elicit ideas and feelings related to the patient's life (Levenstein et al. 1989: p. 118). While physicians will be able to attend to patients' concerns more effectively when they know what the patient expects, a patient's expectations should be addressed only after the physician deals with the more urgent problems.

In the same year, Weston and Brown, also members of the Levenstein research team, examined the gaps in the current medical model for incorporating the beliefs of the patients into the medical interview process. They found that patients' beliefs will determine not only which symptoms are revealed to the physician but also how they

understand the cause and treatment of their illness and well as the "moral meaning" patients will ascribe to their illness. Weston and Brown showed that when the physician is familiar with the patients' beliefs and takes them into account, allowing the patients adequate time to say everything that they feel they need to, the health outcomes are improved. If the doctor takes the time to understand what the patients' beliefs are about their illness and treatment, the physician can give an explanation that is consistent with the patient's view without necessarily accepting or agreeing with that view. "Without some agreement about the nature of what is wrong, it is difficult for doctor and patient to agree on a plan of management that is acceptable to both of them" (Weston and Brown 1989:83). An example given is that of a patient going to see the doctor for a sore throat expecting to receive penicillin, but is urged instead to gargle with salt water. Weston and Brown conclude their study by advising that physicians be sensitive to the cues given by the patients that indicate how long they want to speak and what they want to speak about rather than trying to get the patient on track as soon as possible in the interview. Using this strategy will alleviate disagreements later on in the interview and will increase patient satisfaction and adherence to treatment regimens.

In 1997, a group of physicians conducted a literature search for studies that they could use to develop practical skills for addressing communication issues that occur daily in their clinical practices. This group, led by Ellen Rosenberg continues to advise that providers should allow patients plenty of time at the beginning of the interview to complete their account of the reason for their consultation. Providers should encourage patients to give a complete list of reasons for their visit. They found the elicitation of

patient history as the most important part of the effort to correctly diagnose and treat patients. During the diagnosis and treatment, physicians and patients should work together to arrive at a common understanding as to the nature of the problem and the treatment plan. The group recommends both asking the patient what they want to know, and confirming that the patients have understood what was said. She encourages providers to remember, "Patients want more information than physicians usually give" (Rosenberg 1997:282).

In his study on patient expectations, sociologist Bob Peck proposed that the doctor-patient relationship does affect health outcomes: higher satisfaction among patients also results in higher adherence of medical treatments prescribed by the physician (Peck 2002). Peck's research sought to find an appropriate tool for measuring both patient satisfaction and whether or not the patient's expectations were met in the medical interview. He found that patients do bring rather specific expectations to the medical interview, including whether or not they expect to receive a new prescription, referral to a specialist, or diagnostic testing (Peck 2002). Peck's results contradict conclusions by Rosenberg in 1997 who found that patients are more satisfied with providers who understand and address them as "whole people" regardless of whether the provider meets their expectations or not (1997:282).

2.1.3 Health Literacy

There is another issue that has been focused on increasingly in the past 15 years that can significantly affect communication between patients and providers and patient adherence to treatment: health literacy (Stvan 2007). Health literacy is the degree to

which the patients "have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Parker and Gazmararian 2003:115). Health and educational researchers only began to look more intensely into the effectiveness of healthcare communications and the barriers created for patients by poor communication after the publication of the National Adult Literacy Survey (NALS) in 1993 (Schwartzberg 2006:7).

In 1995, a group of physicians in Atlanta conducted one of the largest studies on health literacy to date, assessing the level of health literacy among a range of over 2500 patients. The researchers found that around 33% of native English speaking patients lacked the health literacy necessary to function in the American health system while 61% of Spanish speaking patients lacked the same literacy skills (Williams et al. 1995). In addition, the patients with the lowest levels of health literacy are also the ones with the greatest health needs in this country. Patients with low health literacy have less knowledge about their diagnosis and treatment even after leaving the medical interview. Of the patients surveyed that were rated as having a low health literacy in this study, "42% of the patients did not understand directions on a pill bottle for taking medication on an empty stomach, 26% could not understand information on an appointment slip and 60% could not understand an informed consent document" (Williams et al. 1995). The study also found that patients who are informed have better outcomes than uninformed patients. They are able to truly communicate with their providers and conduct outside research on their illnesses including using online sources and an overall increased awareness of relevant health studies. This study has vast implications for this

research project as it indicates that native language can have a tremendous effect on the patient's health literacy with over half of the non-native speakers unable to communicate and comprehend basic health information.

A study by four medical doctors in 1998 showed that patients with inadequate health literacy were twice as likely as patients with adequate literacy to be hospitalized between 1994 and 1995 (Baker et al. 1998:791). The patient's literacy was graded using the Test of Functional Health Literacy in Adults or TOFHLA. This group found that health literacy was associated more strongly with hospital admission than of number of school years completed. They concluded that patients with inadequate literacy form a "uniquely vulnerable group. They have worse health, fewer economic resources, and less ability to successfully navigate the health care system and complete personal health care tasks" (Baker et al. 1998:797).

Most healthcare information is written at a college level despite the fact that the average American reads at only an eighth grade level (Schwartzberg 2006:8) Consider the following scenario drawn up by Schwartzberg:

> "For example, 'Take 1 teaspoon four times a day.' Directions that use simple words and seem very clear to the health professional can be very confusing to people who try to carry them out and realize at home that they do not have enough information to confidently follow the instructions correctly. In this case, how do you divide a 24-hour day by 4? Do you count nights as 'day'? Do the instructions mean to take the medicine every six hours, or every three and a half hours while awake? Does the interval have to be spaced out? Could one take two teaspoons in the morning and two at night, or one dose every hour? And is a teaspoon a regular spoon or a soup spoon?"

Though these instructions seem to be written in language that is easy enough to understand, one can see how patients could become confused, particularly if English is not their first language. The next section will explore patient beliefs that are relevant to the medical institution and how well the patients comprehend and comply with provider instructions.

2.2 Culture and Medicinal Beliefs

This section of the chapter will cover the different beliefs about health, the body, and illness that patients bring to the medical interview. While this study focuses on patients who have immigrated to the United States, there are many diverse beliefs even among American with regards to our health. This section will explore the literature as it relates to patients' beliefs and the causes of illness and as well as the presuppositions they bring with them and the effect they have on the medical interview.

2.2.1 Introduction to Patient Beliefs

Patients bring a number of different beliefs with them to the medical interview. Their communities and the cultures in which the patients were raised influence their beliefs. I wanted to find out about some of the different beliefs held around the world in regards to health, the body, and illness. With this knowledge we can have a greater understanding of what kinds of beliefs immigrants are bringing with them when they enter the American medical system. The review of relevant literature also found that one does not have to come from another country to possess health beliefs that differ from those of mainstream Western medicine.

> After numerous attempts to treat a patient, hospital staff become angry and frustrated by the patient continuing to make herself sick through inducing vomiting. "Describing herself as the wife and daughter of plumbers, the patient notes that she was informed by the medical team responsible for her care that she had 'water in the lungs.' Her concept of the anatomy of the human body had the chest hooked up to two pipes leading to the mouth and the urethra. The patient explained that she had been trying to remove as much water from her chest as possible through self-induced vomiting and frequent urination. She analogized the latter to the work of the 'water pills' she was taking, which she had been told were getting rid of the water on her chest. She concluded 'I can't understand why people are angry at me" (Kleinman 1978:254).

One does not necessarily have to emigrate from a different country or speak a different native language to have cultural beliefs that differ from that of the physician. A RAND corporation study in 2005 reports that 53% of the African Americans surveyed agreed that there is a drug to cure AIDS, but poor people are not being told about it, and 1 in 6 believed that AIDS was created by government scientists to control the black population (Underwood and Alder 2005:70). If this type of mistrust is that common among members of the population, we can expect that minorities from many different backgrounds outside of the US will have similar suspicions about medicinal practices in the US. The field of cultural anthropology has contributed extensively to research on medical beliefs in different parts of the world. However, this research typically fails to consider clinical issues:

> "cross cultural studies of medical systems have described underlying belief systems concerning causes and cures and particular modalities of treatment, and have related diseases to culturally patterned behavior. These studies have usually been much more concerned with medical arts and sciences than with the application of medical knowledge in practice" (Kunstadter 1980: 289).

While it would be impossible to name every health belief of every culture that differs from the general consensus of the Western medical system, my review of relevant literature has turned up a number of patterns that are affecting the most common medical treatments in America. Among them: differences in the *causes* of disease, differences in prenatal and postpartum care, and proper and timely utilization of health care services.

2.2.2 Causes of Illness

When patients from around the world first emigrate to the US, they bring with them beliefs about health and illness that may be unknown to the provider. If a patient from one of these cultures comes to the United States, he does not check his culture at the door. Rather, it remains a part of who he is as a person and a patient. When a patient comes from a cultural background that has health beliefs far different from those of the country in which he resides, the only hope for that patient to receive quality medical care comes when either the patient gains complete understanding of the health beliefs of his host nation or the physician of the host nation has an understanding of the patient's beliefs. This section will look at two causes of illness in a patient: spiritual and physical. The spiritual causes are represented here by the Akan of Ghana and physical causes are discussed using the beliefs surrounding hot and cold diseases and treatments in Chinese cultures. Post-partum beliefs in East Asian cultures tend to combine both spiritual and physical sources of illness.

Among the Akan people of Ghana, West Africa, all diseases can be classified in one of 9 categories each one distinguishing between the causes of the disease which

range from witchcraft, to evil, to a medicine bottle being stepped on (Konadu 2002). The main causes of disease in this community of people are spiritual. Something as simple as jealousy can cause one to fall ill. Obviously the cure for such diseases would greatly differ in the Western medical system from what a patient would expect in Ghana.

The traditional Chinese folk view distinguishes between hot and cold foods and hot and cold diseases with each being treated by the opposite remedy (Gould Martin 1978:39). Hot diseases include such symptoms as fever, diarrhea and rashes and would be treated with cold foods, for example raw or lightly cooked fruits or vegetables. Cold diseases can show such symptoms as shivering and apathy and are treated with hot remedies such as meaty, fatty, oily, sticky and dry foods (Gould Martin 1978).

Post partum concerns for both Korean and Chinese mothers among many other Asian cultures include keeping warm, avoiding the wind, a restricted diet and restrictions from washing (Sich 1981, Pillsbury 1978). Pillsbury listed twelve rules for "doing the month" after giving birth. Do not wash yourself and do not wash your hair for the entire month. Do not go outside for the entire month. Do not eat any raw or cold food. Eat chicken. Do not be blown on by the wind. Do not walk and move around. Do not go to other person's homes. Do not get sick during the month. Do not read or cry. Do not have sexual intercourse during the month. Do not eat at the table with the rest of the family. Do not burn incense (1978:15). The problems that will confront these patients in the Western medical system begins in the labor and delivery room where "cold food" such as ice chips are seen as a regular aid in giving birth. This

is compounded after the delivery with the instructions not to wash. Because the Chinese believe that the joints of the body are loosened during childbirth, this puts the mother at risk of arthritis in the future is she chooses to wash her hands before handling the baby, something certain to be frowned upon in the United States. In addition, doing the month requires a mother to live in confinement and isolation from others without exercising, reading or even crying. While this may be easy to fulfill within the Chinese society, the challenges that these patients undoubtedly face when receiving post partum care in a Western facility are numerous

In addition to beliefs about why they are sick, patients also bring beliefs about Western medicine and it's effectiveness to the medical interview.

The differing ideas about what causes disease proved to be an important obstacle for patients and providers in this study. Further illustrations will be expounded upon in the results and discussion chapters.

2.2.3 Patient Presuppositions

Patients' attitudes towards the Western medical system will affect not only how well they trust their physicians and the medical advice that they receive, but also how likely they are to actually utilize these services in a timely fashion and comply with the instructions given to them.

In 1996 a group of medical researchers did a study in the San Francisco Bay Area of California in which they examined the health beliefs of the Vietnamese population and compared it to the utilization of health and preventative medical services by this group. Jenkins et al. found that the health beliefs of the Vietnamese do differ

greatly from those of the general US population (1996:1049). The Vietnamese commonly believe that disease is caused by an imbalance in the "yin" and "yang" forces. In order to restore balance, patients will normally seek treatment at a Chinese herbalist. Western medicine is commonly seen by the Vietnamese as being too strong or too "hot" and can further upset the internal balance. Some of the results of the survey seem to contradict themselves showing a population at odds with its on beliefs as they transition into a Western culture. For example, 90% responded that "Western medicine is more effective than Eastern medicine," but 65% answered "coin rubbing is the best way to treat a cold." 75% of respondents said "I prefer to see a Western doctor as soon as possible, when sick" while 67% said that "some diseases are caused by the wind. (Jenkins et al. 1996: 1052). However, despite the fact that nearly half of the Vietnamese surveyed thought that a yin/yang imbalance can cause disease, this study found that the cultural attributes of this population did not explain health care access or underutilization of health care services. Rather, those who were acculturated were "neither more nor less likely to have utilized preventative services" (Jenkins et al. 1996: 1054). Accessibility to health care, poverty and marital status were more likely than the cultural background to affect actual utilization of health care services. Nonetheless, Jenkins suggests that health care providers attempt to better understand and respect the cultural beliefs and practices of their patients. Communication between doctor and patient can be better facilitated when providers are sensitive to the cultural differences.

In a study comparing beliefs about medicines, Robert Horne and his team of researchers compared Asian and European students using a questionnaire to find where

the two cultures differ in this area. They found a strong connection between the cultural background of the student and their beliefs about the intrinsic nature of medications, their potential for benefit and harm. However, there was no connection between culture and views about over prescribing or adverse affects of medications (2004:1312). In short, Asian students were more likely than European students to see medicines as intrinsically harmful. As a result, the Asian students had much less experience with prescribed medication than their European counterparts. In this study, "Asian" was made up of students from very diverse Asian nations including India, China, and Taiwan.

How then can a physician elicit these beliefs from a patient? How does the American medical community accommodate these and other beliefs about health and illness that exist in the mind of the patients? Linguistic research has noted similar types of "incompetence" in non-native speakers of English that have been studied in fields such as Pragmatics. For example, ESL researcher Gabrielle Kasper says about the use of politeness strategies,

> "One socialization goal is to learn how to behave politely, linguistically and otherwise. 'Competent adult members' comment on absence of politeness where it is expected, and its presence where it is not expected; social appreciation is conveyed and withdrawn accordingly. Not-so-competent participants, such as nonnative speakers, suffer the perennial risk of inadvertently violating politeness norms, thereby forfeiting their claims to being treated as social equals." (Kasper 1990:193)

Consequently, if participants in the medical interview are not told what to expect-not only in terms of diagnosis and treatment of illnesses, but also in regards to norms of the

interview process itself-they may not have access to equal treatment. That is why effective communication between patients and providers is a vital component of the intercultural medical interview.

2.3 Intercultural Medical Communication

"Communication is a complex process under the most straightforward of circumstances; it is far more complicated when the basic rules that govern communication are uncertain or unclear. This is the case when speakers do not share the same basic medium-for instance, when patients do not speak the same primary language as their physician." (Roter 2002:390.)

It is apparent in the research of communication between participants from different cultural backgrounds that there are multiple challenges to be overcome by the participants in both comprehension and effective communication. The leading linguistics researchers in this area are Scollon and Scollon. Their 1995 book, *Intercultural Communication* outlines the many difficulties that speakers experience when encountering a participant from another culture. This is apparent not only in tourist exchanges, but often in business and even medicine (Davidson 1999, Carillo et al. 1999, Flores 2000, Angelelli 2002, and Ferguson and Candib 2002).

2.3.1 The effect of differing cultural values on care

In order to fully understand how a patient's cultural and medicinal beliefs affect the medical interview, one must look at how a medical interview plays out when these differences become an issue. This section examines a number of different studies in

which doctors and patients attempted to communicate, but the linguistic and cultural barriers held them back.

A study in conducted in 1982 compared the recall of two stories by American women and Australian Aboriginal women in order to make a case for non-compliance due to culture-based schemata and comprehension. The stories dealt with a sick child who required medical attention. Both the cause of the illness and the treatment were described in the story. The cultural schemata with which each group approached the story caused their recall to be greatly different from each other's with the Aboriginal women recalling a story quite unlike the original. Among one of the biggest problems that the Aboriginal women had was they order in which the story occurred which did not fit into what they knew as the common order for seeking medical care and treatment. The authors concluded: "Variation in underlying knowledge systems impedes even *willing* compliance on the part of culturally divergent clients because information is either not understood when it is first communicated or not recalled accurately" (Steffensen and Colker 1982:1949). In this case the cause of the illness was not understood by the Aboriginal women and was instead recalled as a treatment of the illness. The authors criticize Western medicine as being "based only on germ theory and scientific methodology with minimal attention being directed to the effect of patients' attitudes and beliefs on their contracting an illness and the subsequent prognosis" (1982:1950). Fortunately the participants were not in a clinical setting when these critical misunderstandings occurred. However, the study was greatly effective in achieving its aim: showing that the absence of shared cultural concepts between

providers and patients can impede even willing compliance (Steffensen and Colker 1982:1949).

In a later study, the cause of illness was also found to be a significant point of misunderstandings between Ethiopian immigrants to Israel and their health care providers. This study, which combined patient interviews and participant observation, found that although patients are likely to change their expectations of treatment the longer they are in the new culture, they continue to experience symptoms that are culturally, but not biomedically, meaningful. Patients are often dissatisfied when they perceive themselves as sick and the providers deem them healthy after an office visit. This conflict could be caused by the limiting views of the Western medical system upon stress and culture related illness. "In many non-Western cultures, illness is viewed and treated in an integrated way that involves body, mind, spirit, community, family, and cosmos" (Reiff 1999:1814). If the provider cannot accept or understand these views, communication will break down and a recession in patient adherence will follow. Crucially, this study focused not solely on language barriers as a cause for miscommunication within the medical setting, but on patient's culturally based perceptions about their bodies and illness. It is critical that the medical community come to terms with the perceptions that each culture possesses before attempting to diagnose and treat patients from another culture.

In 2000, Glenn Flores, a medical doctor from Boston Medical Center, conducted an in depth study of the Latino community in order to draw out emerging cultural concepts that could be applied to any cultural group. This study discovered that no only

do provider attitudes affect patient care by at times becoming a barrier to effective care, but providers sometimes provide "a lower quality of care to patients from different cultures" (2000:20). The beliefs that patients hold about their health and body have a profound impact on the care that they receive. Flores found that these beliefs could impede preventative efforts, delay or complicate medical care, and result in the use of neutral or harmful remedies. In this study, a number of negative consequences were discovered when the provider failed to consider and incorporate the patients' beliefs into the medical interview. The first problem is that the history taking from the patient was often inaccurate or incomplete. In addition, fewer medications were prescribed and the patients received inadequate relief from pain. Furthermore, these patients were less likely to have a primary care provider, less likely to adhere to treatments, their immunizations were delayed, and they were less satisfied with the care that they received. Flores concludes as a result of this study that 'recognition of and appropriate response to a patient's normative cultural values is important, because failure to do so can result in a variety of adverse clinical consequences" (2000:21).

Using a methodology similar to the one in this study, a group of researchers in London videotaped consultations between patients and providers in local general practices. The key consultations were transcribed and analyzed by the research team. Celia Roberts et al. then closely examined the consultations that dealt with patients from a culture not shared with the provider. They found that language and/or cultural differences caused 20% of the misunderstandings (Roberts et al. 2005:466). In addition, consultations with limited-English speaking patients were more difficult for the

providers requiring a great deal more patience. In a critical observation, the researchers noted that, "Language difficulties can lead to negative judgments and stereotyping as general practitioners view patients as 'difficult' through the prism of language" (Roberts et al. 2005:466). Many people may have the same problems in day-to-day interactions with limited English speakers. Oftentimes, judgments are made about the intelligence or competence of a speaker based on their language ability or cultural differences alone. The results of this study were similar to those of the Flores and other comparable studies in concluding that language and culture cannot be separated and this is the point at which the majority of misunderstandings occurred. Patients' culture will determine the presuppositions with which they enter the medical interview including how much information to provide to the provider, what topics are permissible to discuss and when and how to interrupt. The key problem causing misunderstandings in these consultations was not the fixed health beliefs of the patients, but rather "the language/cultural issues concerned with relating to and representing illness to the general practitioner" (Roberts et al. 2005:466). Roberts and her team concluded that while textbooks have attempted to address issues of communication between patient and provider, they are too often focused on monolingual, monocultural consultations. Providers are advised here to accept that patients will have a different way of presenting themselves and representing their illnesses and to develop strategies for preventing and managing these misunderstandings as they occur (Roberts et al. 2005).

2.3.2 The role of the medical interpreter

Many of the more recent linguistic-centered studies on intercultural medical communication have looked specifically at the role of interpreters in the medical interview. Although patients who use interpreters will be excluded from this study, the work on medical interpreting is still worthy of a brief discussion. This area enumerates a number of issues that can occur between doctors and patients with different backgrounds. In his 1999 dissertation, Davidson conducted participant observation research at a health clinic in California. His research followed Spanish-speaking patients requiring the services of interpreters into the medical interview to record and observe the interactions between the three participants in the room. Davidson describes the focus of the medical interview as being the "diagnosis" or the "identification of disease through the interpretation of physical and verbal signs, and the subsequent development of a plan of treatment" (1999:235). The view of a diagnosis as a form of interpretation is going to be important to the analysis of discourse intended here. Indeed, this account works well in describing the process that the patients and physicians go through when trying to identify the disease and work towards a cure that they can both understand and accept. The physician is constantly striving to interpret the words of the patient regarding his or her illness into a medical disease. The physician and patient, no matter what their backgrounds, are speaking in two different languages. Adding a third person can alter or even eliminate the voice of one of the participants. Davidson found that physicians would often speak directly to the interpreter, with the interpreter answering directly, thus eliminating the patient's voice from the interview

completely. Although it is the physician's job to weed out which information is or is not important when making a diagnosis, the interpreter will often only offer up information that he or she deems appropriate. Even when adding information to the patient's medical charts, the physician must use objectivity when writing the patient's subjective statements. By choosing which quotes to include in the chart, the physician is making decisions about which utterances from the patient are important to his or her medical care, with the physician playing the role of ethnographer to the patient, translating cultural elements into biomedical language (Purtillo and Haddad 2002, Coker 2003). This situation is further complicated when the patient cannot explain the illness directly, but only through an interpreter.

Exacerbating these problems is the reality that interpreters are stretched thin in the medical setting. They are few and far between and clinics often do not have enough interpreters to cover the patient load. Davidson reports that only 1 in 3 patients that need interpreter services are actually assigned an interpreter at the clinic he studied (1999:25). A relative or friend was allowed to sit in for the interpreter twice as often as a professional interpreter was called in for assistance. This type of situation has consequences of its own. Underwood and Alder in their article "When Cultures Clash" tell the story of a man named Mohammad Kochi. When he brought one of his daughters to interpret for him, she decided what information was important to pass on to her father. When the doctor told him that he still had cancer after his surgery, his daughter did not pass that information on for fear that it might upset him (Underwood and Alder

2005). His cancer was still treatable at the time, but for Mohammad, by the cultural issues were resolved, it was too late.

A study in 2001 lead by neurological researcher Virginia Elderkin-Thompson recorded and transcribed medical interviews in which bilingual nurses were used as interpreters in order to examine the accuracy of medical interpretations provided by nurses untrained in medical interpreting. In this study, some of the interviews went flawlessly with no misunderstandings occurring, but the ones that had errors were serious mistakes affecting the physician's understanding of the symptoms or the credibility of the patient's concerns (Elderkin-Thompson 2001).

The problems with medical interpreting are both linguistic and cultural in nature. A study of Malaysian medical students who received their training in Australia found that when they returned to Malaysia as practicing physicians, these students had a hard time with one-to-one medical language, translating their medical knowledge, learned in English, into their native language being used by the patients. They found that the English language had a broader range of words to describe problems like pain and this made it difficult for the physicians trained in English to assess and treat Malay speaking patients (Chur-Hansen 2004). Research on medical interpreting gives a very critical look at how the physicians handle a cross-cultural situation when given, the opportunity to take shortcuts by communicating solely with a person that he may view as more competent to provide information, the medical interpreter.

The decrease in the ability of patients to communicate clearly with their health care providers and the often inaccessibility of medical interpreters leaves much of the

burden with the providers themselves. The providers must be able to both elicit relevant information from the patient and clearly explain the diagnosis and treatment. The next section addresses the providers' preparation to deal with these challenges on a daily basis.

2.3.3 Health Care Provider Preparation

The number of miscommunications between doctors and patients has lead many scholars to look for a new approach in training physicians to assess a patient's cultural beliefs as well as his symptoms. Though there is no hard evidence that these suggestions have been put into practice within the medical community, authors continue to attempt to address this problem from many different viewpoints. A study in 2006 by Johnston and Herzig questions providers in Montana about their view of "cultural competence." The providers in this study most commonly defined "cultural competence" as being familiar with the diseases of which a particular ethic group is most at risk of contracting. This tells researchers that we still have a long way to go in educating providers in treating patients from different cultures.

Carrillo et al. developed a framework for more explicit instruction for medical students on how to analyze the individual patient's social context and cultural health beliefs and behaviors (1999). Their program consists of five modules including basic information on culture, core cultural issues, understanding the meaning of illness as explained by the patient, determining the patient's social context, and negotiating across cultures. "Despite the multitude of cultures in the United States, physicians are inadequately trained to face the challenges of providing quality care to socially and

culturally diverse populations" (Carrillo et al. 1999: 830). This program is intended to train physicians that face many diverse backgrounds and belief systems every day. Even with the development of new educational systems and modules for medical students to follow, the problem remains. After learning in a classroom setting how to negotiate medicine across cultures, the physicians enter into residency where this training is neither applied nor encouraged.

A recent study in the *Journal of the American Medical Association* surveyed residents nearing the end of the final year of their training to determine how prepared they were to deal with cross-cultural issues that they faced with patients. Weismann et al. sent surveys to a random sample of residents and asked them to rate how much training they had received to deal with sociocultural issues before beginning their residency and after seeing patients how prepared they felt to deal with the issues that had confronted them during this training period. Nearly all of the residents indicated that it was important to consider the patient's culture when providing care (2005:1061). The results showed that even the residents who felt that they had actually received instruction on cross-cultural medical care indicated that they had neither the time nor the mentors to deliver cross-cultural care when actually treating patients and that they are not evaluated on their ability to do so (Weismann et al. 2005). The major problem for these residents was that they did not have adequate time to address cultural issues (Weismann 2005:1065). The cross-cultural situations that posed the biggest problems for these residents were in treating patients in the following categories: religious beliefs or practices at odds with Western medicine, mistrust in the US health system, religious

beliefs that may affect treatment, use of alternative/complementary medicine, and recent immigration to the US (Weismann 2005:1062). Corresponding to those needs is the fact that these are the very issues that the physicians reported receiving little training to deal with, including how to address patients from different cultures, how to identify patient mistrust, relevant religious beliefs, relevant cultural customs, and decision-making structure (Weismann 2005:1062).

The combination of lack of training for how to identify these potential problems with the residents saying that they do not have time to address cultural issues poses a grave problem for the physicians and patients in the interview. As described by Weston and Brown, even patients from a similar culture bring their beliefs and expectations to the medical interview. It is crucial that the patients be allowed to speak from their voice of lifeworld in order for the physician to understand both what the patients expect from their time with the physician and whether or not the patients will adhere to the prescribed treatment. Weismann et al. suggest giving residents more time to develop the communication skills needed to better understand their patients as well as the establishment of a solid mentor program to guide and evaluate residents in dealing with these types of issues (2005).

Medical doctors are not the only health care providers facing challenges with patient comprehension. A lot of the burden also falls on the nurses who interact with these patients, checking them in and taking their medical histories. The field of nursing was addressing this issue and educating nurses before the field of medicine brought these issues to the medical doctors. In 1993, Mary Ann Jezewski developed a model for

nurses wherein the nurses serve as a cultural broker or advocate for the patient, working to bridge the gaps in understanding between the culture of the health care professional and the culture of the patient and his community (1993). This model addresses not only the linguistic concerns, but the cultural as well, acknowledging that breaking down language barriers alone is not enough to treat these patients. She describes the act of patient advocacy as "and act of loving and caring for others as you would love and care for yourself" (Jezewski 1993:79), equating patient advocacy and empowerment to the golden rule of medicine.

Most of the research done in cross-cultural medical encounters describes general issues facing the medical community and its patients as well as some specific problems that can occur when the patient uses the services of an interpreter in the medical interview. Although a few very broad solutions have been proposed to repair the problems such as "give the patients time to talk" and "try harder to read the cues that the patients are giving," there has yet to be a critical discourse analysis of the intercultural medical interview that analyzes specifically what breakdowns occur and when they occur during the interview process. By finding and describing the linguistic features that surround the aspects of the discourse and commonly trigger misunderstandings between the physician and the patient, we can identify where lack of comprehension on the part of the patient occurs. From there it becomes possible to work towards redesigning the discourse structure to accommodate the patient's beliefs about health, disease, illness and the medical interview itself. Therefore the current project

will investigate miscommunication cues in doctor-patient discussions by focusing on four specific research questions.

2.4 Research Questions

2.4.1 What, if any, misunderstandings occur between the patient and the physician during the medical interview?

In 1985, ESL researchers Gass and Varonis conducted a study investigating interactions between native speakers and non-native speakers. From their research emerged a number of non-understandings that can occur. "Misunderstandings" in this study will be founded upon what Gass and Varonis call "non-understandings" and define as "those exchanges in which there is some overt indication that understanding between participants has not been complete" (1985:73). When there is not an overt indication, for example if a misunderstanding is identified in the debriefing of the patient, an attempt will be made to go back to the transcript and identify the point where the trigger occurred but was not addressed. The misunderstandings will be counted and classified according to different types of misunderstandings if the data lends itself to these kinds of classifications. Because there is no standard for classifying misunderstandings in this context, categories will be created for the misunderstandings found here, as necessary.

2.4.2 In what ways and with what frequency are misunderstandings addressed, ignored, or unnoticed during the medical interview?

Identifying how the misunderstandings were addressed will follow the same theory as identifying the misunderstandings. Where there is an "indicator" of a

misunderstanding as defined by Gass and Varonis, a "response" will show that the indicator was addressed. If misunderstandings are identified as a result of the debriefing of the patient, the issue was more than likely not addressed within the medical interview and will be classified as unnoticed. Although there is a distinct difference between misunderstandings that are ignored and unnoticed, in most cases it will be impossible to distinguish between the two. Therefore, although it is acknowledged here that there are three categories: addressed, ignored (not addressed) and unnoticed, the analysis will focus only on the categories of addressed and unnoticed.

2.4.3 What, if any, "cultural" beliefs brought to the interview might have contributed to the misunderstandings that occurred?

Culture here is defined as "a shared system of values, beliefs, and learned patterns of behaviors" (Carrillo et al. 1999:830). Weston and Brown state that "when doctors and patients meet, they each have expectations and feelings about the encounter; if these are at odds or inappropriate, there will be difficulties" (1989:83). Therefore "cultural beliefs" will be those expectations that are driven by the participants' shared system of values. These will be identified by looking at patterns in patients' biographical information and their language usage, and correlating those with the types of misunderstandings that occur. These beliefs may also be identified during the debriefing time by following the directions that patients lead in their descriptions of the medical consultation. The cultural anthropology literature will assist in answering this question as a number of studies have already been done on different cultural groups

and their beliefs about health, illness, and treatment of disease (e.g. Kleinman et al. 1978, Gould Martin 1978, Konadu 2002, and Kamat 2006).

2.4.4 What aspects of the discourse structure might be changed in order for these misunderstandings to be identified and repaired during the medical interview?

After identifying the misunderstandings and how they manifest themselves within the discourse, it then becomes possible to critically examine the structure of that discourse and propose repair strategies (questions asked, suggestions made) for any misunderstandings that occurred. The discussion chapter will expand on possible changes in the medical interaction that could be recommended based on the beliefs unearthed in the study.

CHAPTER 3

METHODOLOGY

This study aims to examine the language used between health care providers and their patients who come from different cultural and language backgrounds. Because the only way to really examine what goes on in this context is to capture natural language, I video recorded provider-patient interactions in order to look more closely at the intercultural interview and to try to sort through some of the misunderstandings that occur in this environment.

This methodology involved not only finding patients and health care providers who don't mind being video recorded during the medical interview, but also necessitated finding a clinic that would approve the use of facilities and medical staff in the project.

3.1 Location

The first step in beginning the data collection was finding a clinic in which to conduct my research. To begin, I thought about clinics that were in an area where they would see a lot of patients from diverse backgrounds. Finding a clinic that regularly engaged in intercultural medical interviews was not only to assist in my patient participant population. It could also assist in persuading the clinic to allow the study to be conducted there if this is an issue that is consistently addressed within the clinic

itself. The hope was the study would not only advance the field of Linguistics and more specifically, Intercultural Medical Discourse, but also provide clinics with practical linguistic tools that could be used to aid the providers with their intercultural medical interviews on a daily basis. The most difficult aspect of finding a clinic was getting consent from both the clinic administration and the medical staff to conduct the research. The first clinic that I approached seemed to be a good fit. They were interested in cross-cultural medicine and had patients with very diverse backgrounds. I first obtained permission from the clinic administrator and director of the medical staff. Discussions with the clinic were going well until I sought permission from the physicians. This being an academic medical facility, we could not find common ground on which the physicians at this clinic could be both participants and co-authors of the study. I offered my data to them for use after the publication of my dissertation, but that could not appease this group of "academic physicians."

Feeling quite defeated, but equally determined, I approached the director of a smaller local health clinic. I approached the director of the clinic to explain the study and left a copy of my research proposal for him to review. After reading the proposal, the clinic director set up a meeting with me to discuss the project. We discussed what the data collection process would entail and issues of privacy for the patients and providers at the clinic. After the clinic director agreed that the study could be beneficial for the clinic, he arranged a meeting for me to sit down and explain the study to the health care providers at the clinic. Three of the nurse practitioners attended this meeting, including the Director of Nurse Practitioner Services. During the meeting, the

purposes and methodology of the study were explained. The nurse practitioners asked questions about the study, its motivations, and potential implications. Indeed, it is unusual to have a linguistic study being conducted in a medical setting, particularly one that involves qualitative analysis, a method rarely seen by these health care providers. The biggest concern to the providers was the video taping of their medical consultations. Assurances that their names and faces would be kept confidential and that the tapes would only be used for research purposes did little to ease their tension. I reassured them that this had been done before without issue and that it really was the best method to observe and later analyze the language of their medical consultations. The nurse practitioners first asked for some time to discuss the issue and eventually decided to participate. The director of the clinic signed a letter of consent required by the Institutional Review Board (IRB). The director then arranged for me to attend a medical staff meeting. This monthly meeting includes nurses and providers from every department as well as support staff. It was a good opportunity to explain the study, how it would be conducted, and field questions from the staff that offered a new perspective. This meeting proved to be invaluable for contemplating how to select and recruit patients to participate in the study.

One of the most important issues not previously discussed was protecting the privacy of patients who walked into the clinic for treatment outside of the general medicine department such as mental health, or substance abuse counseling. Revisions were submitted to the Institutional Review Board to account for this problem. The study was conducted at this local walk-in medical clinic in north Texas. The clinic had a

number of different departments including general medicine, women's health, immunization, mental health, health education, and pharmacy. This study focused exclusively on the general medicine clinic.

Before the data collection began, I spent a few weeks in the clinic getting to know the routine and the clinic staff. The observation was very useful even as that time period became a time of change for the clinic. (The director of the nurse practitioner services resigned at the end of the first week of observation, leaving the position open to be filled and the study missing one participant.) The observation time was intended to give me a chance to become familiar with the clinic routine, to find out how providers go in and out of the rooms, and to learn the flag system for keeping patients in the order in which they were checked in. The observation was scheduled to last for one week, a few hours a day, but was extended due to complications from the Institutional Review Board that prevented the recruitment of patients until the issue was resolved. This provided plenty of time for the medical staff at the clinic to relax and become familiar with my presence on a daily basis. They all became more conscious of their patients and communication difficulties and the excitement for the study grew as they began to think through and share some of the problems they had experienced with patients from other cultures. This time span also brought to the surface many presuppositions that the health care providers and nurses were bringing to these intercultural medical consultations. My presence became familiar not only to the staff, but also to many of the patients that visited the clinic regularly.

In order to best learn how the clinic worked as a group of many departments working together to get the patients in and out smoothly and quickly, observation time was spent in the waiting room, behind the counter with the receptionists, and at the nurses station.

Time in the waiting room was spent watching patients' behavior as they entered the clinic, where they prefer to sit, and counting which patients went to general medicine as opposed to the pharmacy and mental health. Patients who were going to the general medicine or women's clinic had to sit in the waiting room until they were called back. Women's clinic patients were called through a different door than general medicine patients. All other patients: pharmacy, mental health, immunization, and health education, went straight back without having to wait. This was also a chance to see how many patients had language difficulties when they were checking into the clinic. It was often very obvious to those in the waiting room when a receptionist was having a hard time understanding or being understood. They tended to speak more loudly, enunciating the directions.

Observation from behind the desk with the receptionists was very similar. It allowed for closer observation of what the patients were requesting when they came to the counter. The two receptionists were often overwhelmed with the task of juggling telephones, checking patients in, and pulling charts. In addition, if patients needed to make an appointment for the mental health or women's clinic--the only departments that require appointments--they were taken to a separate, more private window to schedule the appointment with one of the receptionists. During the 5 or so hours of observation, these women handled any number of problems, from students coming in to

get sanitary napkins, to confusion over whether or not they needed a pregnancy test, to the pregnant patient who wanted to know how to get a subscription to one of the magazines in the waiting room. The receptionist patiently handled this query by explaining that subscription cards could often be found in the magazine and allowing the patient to the back of the clinic to search for cards in more magazines and eventually writing down the number to call to subscribe from the magazine cover for the student.

My time at the nurses' station gave the most insight into how the clinic functioned. Within a few days, the nurses were telling me about their children and sharing more and more about their experiences with patients as they came through. When the observation period was extended, they began to give me little jobs to do as I sat at the nurses' station. I calculated BMIs (body mass index) for the health screenings, cut paper snowflakes for the Christmas decorations, and exchanged recipes for the annual Christmas party. I became very good at taking the blood pressure of the nurses and other clinic staff. This made me feel like I was one of the team and helped most of the nurses and providers to view me more as a peer and less as a researcher there to judge their performance. They began to share their stories with me about patients they have seen that would have been "perfect" for my study. For most of the providers, this meant patients they felt did not understand them at all and yet indicated that everything was fine. The providers did not indicate how they solved the problem: whether they asked the patient to repeat back to them what was said or not, but all indications said that the providers left these interviews absolutely discouraged with the lack of comprehension on the part of the patient. For some providers, the "perfect" patient was

one who brought their medicine bottle from home and wanted a refill, the prescription on the bottle being written in their native language, or the patient bringing in bottles to show their current medications which were indiscernible to the nurses and the providers. Sometimes, the "perfect" patient was one who knew what they wanted and insisted upon it, despite the provider's having explained that it was not in the best interest of the patient.

3.2 Participants

There were three categories of participants in this research study: the health care providers, the patients, and the primary investigator who was a participant observer.

3.2.1 Health Care Providers

Five health care providers participated in the study. Four of these were nurse practitioners and the fifth was a medical doctor. Only providers working in the general medicine clinic were used in the study.

Every provider who was approached about participating in the study agreed to participate. One of the nurse practitioners who had agreed to participate resigned from the clinic before data collection began and as a result was withdrawn from the study. All of the health care providers that participated in the study were female as were the majority of the medical staff at the clinic. All of the health care providers at the clinic were "part time." They worked anywhere from 2-4 days a week.

One of the health care providers was a medical doctor. Medical doctors rotate in and out of the clinic on an "as needed" basis. This medical doctor was at the clinic as often as many of the nurse practitioners during the study and was, therefore, asked to

participate. There were two other medical doctors working at the clinic whose schedules were not nearly as consistent and they were not asked to participate in the study. Both of these medical doctors were also foreign born and that was part of the decision not to use them in the study.

To ease some of the self-consciousness on the part of the health care providers, they were told that the study was focused solely on the patients. The providers were told that the study would explore the way that patients from different backgrounds constructed their illnesses. Even having been told that the study would not focus on them, the providers were very aware of the study and of my presence, specifically. The nurse practitioners implied that they felt like their communication was being judged both in and out of the examination rooms.

3.2.2 Patients

There were 20 patients included in this study; they were all over the age of 18 and not needing the services of an interpreter. Two of the patients were native speakers of English, or reported that English was the first language that they learned in their homes. This study sought participants that were non-native English speakers with a few native speakers as a comparison group. The patients all came to the clinic for use of the general medicine clinic; patients visiting other departments were not included.

The clinic reserved one exam room that was used only for the study. This allowed the camera to remain mounted in one place and the participants came to that room for the study. The clinic used for the study is a walk-in clinic, which allowed for randomization of providers based on their rotation through the clinic. The process of

being seen at the clinic is as follows: patients go to reception to check into the department in which they want to be seen. Their charts are pulled and they are called back to be placed in a room on a first come, first serve basis. The nurses check the patients in by taking their vitals (temperature and blood pressure) and recording their complaints in the chart. The next available provider then enters the room for the medical consultation.

Patients were approached after they checked into the clinic and asked if they would be willing to participate in the study. They were told that it was a linguistic study looking at how doctors and patients communicate. The patients were told that their interaction with their doctor would be video recorded, but their names and faces would not be used. The health clinic staff were not allowed to be involved in the recruitment process. To prevent undue influence they could not ask students to participate in the study. However, some of the nurses would "tip me off" if, after checking in a patient, they found that the patient would be good for the study. If the patients agreed to participate, they were moved to the designated study room to fill out the required consent forms while they waited for the next available provider. A small tabletop sign was put out at the nurses' station to signal that there was a patient in the study room ready to be seen. The next available provider participating in the study would go to the room and begin the medical consultation. Participation in the study only took as long as the medical consultation plus an additional 5 minutes for surveys after the consultation was completed.

Time constraints were sometimes a factor in recruiting patients. There were days during the study when patients were waiting up to an hour or more to be seen by a provider and felt like participating in the study would even further delay their visit. The camera proved to be a bigger factor in patient participation. Many patients were understandably reluctant to be videotaped talking to their health care provider about their illnesses. There was the additional factor of why the patient was at the clinic. If a patient was being seen for issues that they considered to be "private" or "personal," they would not agree to participate. Non-native English speaking patients often expressed concern that their English was not very good and therefore they should not be a part of the study. Those were the patients that the study was targeting and yet they were the most difficult to convince that their language would not be a problem for the study. The overall success rate for patient recruitment in the study was about 30%. That is, thirty percent of all patients approached about participation agreed to participate.

3.2.3 Participant Observer

The researcher was a participant-observer in the majority of the medical consultations for the study. In a couple of cases, when the patients were not comfortable having a third person in the room, or if a procedure was being performed, I waited outside until the medical interview was completed. In all of these cases, the patient was male. During the medical interview, the researcher sat in the most unobtrusive place possible, facing the doctor and patient, but looking to the side while taking notes. The camera was mounted and I controlled it by remote, turning it on when the provider entered and turning it off when the patient left the room.

3.3 Research Compliance

Each participant was required to sign a consent document approved by the Institutional Review Board. They were given copies of the documents with the researcher's contact information. The participants were told that they could withdraw from the study at any time and were given instructions for how to do that. All of the participants were given an overview of the study and what their participation would involve, and how long it would take.

The patients were also required to sign a HIPPA release form stating that their health information would be kept confidential. This form, titled "Authorization for Use and Disclosure of Health Information for Research Purposes," was an assurance to patients that their health information would only be used for research purposes and would not be released to anyone outside of the researcher for the study. Patients were also given a copy of this form to take with them with the researcher's contact information if they had any questions or concerns about the study.

As part of the research compliance, I was required to complete the usual IRB training on the Use of Human Subjects and the HIPPA training that is given to all employees at the medical clinic.

3.4 Procedures

Each of the patients was placed in the study room before their examination. The researcher would not enter the room until the health care provider entered. This was to prevent the patient from sharing the reason for their visit with the researcher. Extra information prior to the consultation may bias the researcher in examining the

comprehension of each party. This could also lead the patients to believe that the researcher could help them explain their symptoms to the provider, having already been given a thorough explanation of what the problem was.

The provider and researcher entered the room at the same time and the provider began the consultation as usual. When the consultation was completed, the patient remained in the room to complete a survey. The provider would often drop the patient's prescription at the pharmacy so that it would be ready for him when he had finished the survey and debriefing. The patient's participation after the consultation was two-fold. They completed a post-consultation survey and answered 7 questions orally about their visit. The camera was kept running so as to capture their answers to the 7 questions on tape. These answers would later be used by a nursing student to judge how well she thought the patients understood what went on during the medical interview.

3.4.1 Tools

There were a number of survey instruments used in the study. In addition to consent forms and HIPPA Authorizations, the participants provided biographical information and answered questions about the medical interview.

3.4.1.1 Biographical Information Sheets

The providers and patients filled out a biographical information sheet that asked questions about their age, gender, religion and native language (Appendix B, Appendix E). It also asked about what languages the participants use in different settings: at home, at work, with family, and with friends. The provider's sheet went on to ask what the biggest problem was that they had in communicating with patients from different

language backgrounds. The providers were given the sheet before participation began and only had to complete it one time. The patients were given the information sheet after the interview as it was combined with a survey on their experience in the clinic and the post-interview survey questions.

3.4.1.2 Post-Interview Surveys

After the medical interview, the providers were given a form to fill out that asked why the patients came and whether or not the cause of the illness was discussed (Appendix C). There were also three questions on a Likert scale that corresponded with questions that were asked of the patient. They were given the surveys as they exited the room and usually completed them immediately before moving on to the next patient while the information was fresh in their minds. One of the unavoidable problems was that after the first interview, providers knew what information they were going to be asked afterwards. This could have affected such questions as "Did you explain to the patient was the cause of their illness was?"

The patient's post-survey form had the biographical information section and then asked questions about their experience in that clinic: had they been to the clinic before and had they seen this particular doctor before (Appendix E)? It also asked about why they made the appointment. There were three questions on a Likert scale specific to the medical interview that they had on the day of participation. The three questions asked how well the patient understood the provider, how well the patient thought the provider understood him, and how satisfied they were with the interview.

3.4.1.3 Patient Debriefing

Each patient was asked a series of seven questions after they had completed the survey. The questions were not written, but were recorded at the end of the medical interview video. These questions were to help the research assistant in determining how much of the medical interview she thought the patient understood.

3.5 Research Assistant

The research assistant was used for her medical expertise. She is an honors student in the School of Nursing at The University of Texas at Arlington with an interest in transcultural nursing. The research assistant was asked to look at the videos of the medical interview and first judge how well she understood the patient and the provider using a Likert scale (Appendix G). She was given codes for all of the patients, no names were disclosed to the research assistant other than those that the patient or provider might have used during the medical interview. She was then asked to look at a tape of the patient answering questions about the medical interview such as "Why did the doctor say that you were sick?" and "What did she say would make you better?" The research assistant was given another survey with Likert scales to judge how well she thought the patient understood what went on during the medical interview (Appendix H).

3.6 Analysis

There were two methods to the analysis of the data: the qualitative and the quantitative. Before any analysis of the data could begin, the interviews had to be transcribed and the survey information had to be entered into spreadsheets and coded.

3.6.1 Qualitative Analysis

The first thing that I did was transfer the videos to digital form and transcribe them using HyperTranscribe software. This software allows the researcher to view the video and type the transcription on the same screen. The keyboard is used to control the starting and stopping of the video so that it can all be done without having to move your hand to the mouse. This made the transcription process go very smoothly. Nonetheless, there was around 15 hours of videotaped data to work through. I transcribed both the doctor-patient consultation video and the debriefing.

I began the analysis by looking through the interviews to identify linguistic indicators of a non-understanding as defined by Gass and Varonis. By searching for an indicator and a repair, it was then possible to locate overt misunderstandings within the transcript of the interview itself. An example of an indicator and repair is shown below:

PR: Are you wheezing?
PT: wheezing? ← indicator
PR: (makes wheezing sound) are you um-I don't know…
making noises when you breathe? ← repair

After identifying all of the indicators that I could find, I then began looking more closely at the patients' answers during the debriefing. By comparing the patient's recall with what was actually said during the interview, I was able to discover what the patient might have misunderstood during the interview. Those are two main ways that the qualitative analysis was conducted: analysis of the transcript and comparison of the debriefing to the medical interview.

3.6.2 Quantitative Analysis

This study was designed to be first and foremost qualitative, so data here are not enough to run complex statistics. Nonetheless the data were able to reveal trends and patterns among the patients and providers. All of the numbers from the surveys were entered into Excel and then SPSS for analysis. First I looked at the frequencies for each question and then used cross tabulations to compare answers between the providers and patients and the research assistant and participants. This enabled me to see on which questions the participants and outside observer agreed or disagreed the most. I then used Excel to develop histograms for each survey question.

These were only the beginning phases of analysis for each piece of the data. The next two chapters will expound upon the results of the study and discuss them further. The following page is a flowchart of the data and analysis process to clarify which pieces of data came from which participants and who analyzed each piece. The thick blue arrows indicated data produced by each participant. For each patient participant, there were three pieces of data that came from each health care provider, four from each patient, and two from the research assistant. Each piece was analyzed by the primary investigator and there were three pieces, indicated by the thin black arrows, that were analyzed by the research assistant.

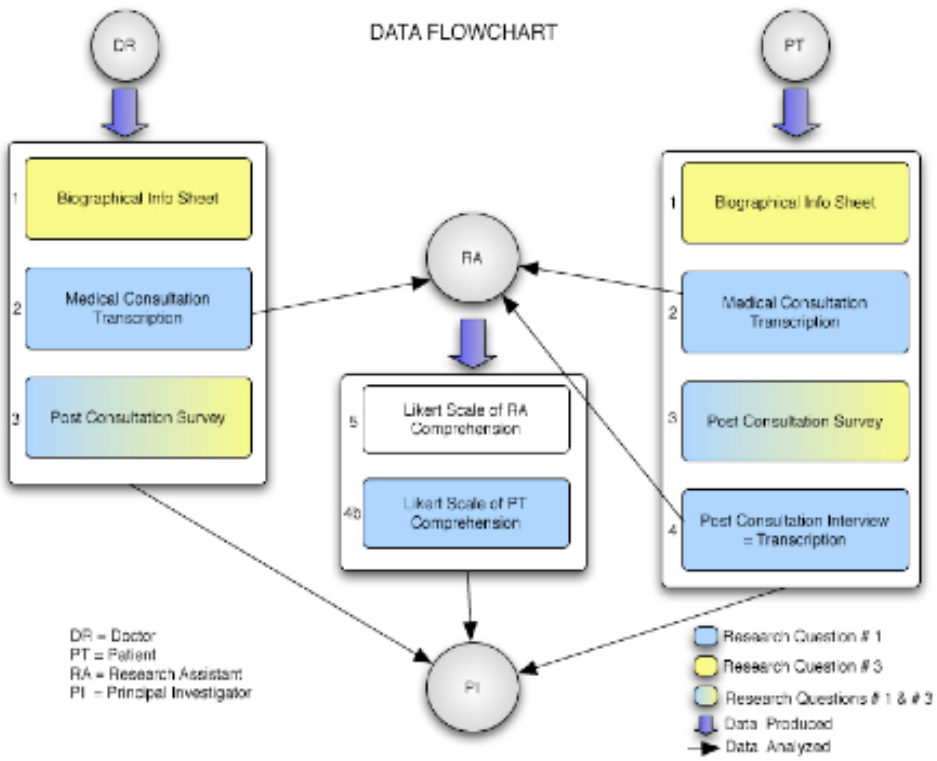


Figure 3.1 Flowchart of Data Sources and Analysis

CHAPTER 4

DATA RESULTS

This chapter will provide an overview of the findings and analysis of this study. This study used a mixed-methods approach, combining qualitative and quantitative analytical tools to examine the data. While the study was designed as primarily qualitative, the quantitative analysis used simple statistics to support the qualitative findings, directing me to the most prominent problems in the medical interview.

The first section of this chapter will describe the qualitative analysis, including the two major types of misunderstandings that were discovered and explored during the study: overt and covert misunderstandings. The second section will use the quantitative tools to look more closely at the patient and provider responses about how they perceived each other's comprehension. The results of the survey filled out by the research assistant will also be included here. The research assistant was able to view not only the medical interview, but also the debriefing of the patient afterwards, completing surveys based on what she observed.

4.1 Qualitative Results

Data collection for the qualitative results and analysis began with a video recording of the medical interview between the patients and providers. Following the interview, the patient was debriefed by the researcher and asked a series of questions in

which they were to recall specific aspects of the interview such as diagnosis and treatment. Both the interview and debriefing were transcribed for each patient. The qualitative analysis was conducted by looking only at these transcripts. This analysis was intended only to examine the language data between the provider and patient. Therefore, the surveys and biographical information completed by the participants were not taken into account at this stage. Many different types of misunderstandings emerged during the medical interview and were separated and coded. The transcript of the medical interview was initially reviewed and scanned for observable misunderstandings by the patient or provider; these are what I refer to as "overt" misunderstandings. The details of the medical interview were then compared to the patients' debriefings in which they recalled and discussed aspects of the interview. This method was used for discovering those "covert" misunderstandings that may not have emerged during the provider-patient interaction and could not be discovered through examination of the interview alone. Although the majority of overt misunderstandings in this study were addressed by the participants, the same cannot be said for the covert misunderstandings, which by their nature go unrecognized during the medical interview. Both covert and overt misunderstandings occurred even when patients and providers rated themselves as comprehending at a high level.

4.1.1 Overt Misunderstandings

Overt misunderstandings are usually recognized and immediately repaired during the interaction. Indicators such as silence, direct questions, inappropriate

responses, and echoing let an attentive interlocutor know that a misunderstanding has occurred.

The 25 overt misunderstandings that were found generally fell into two categories: linguistic and cultural. There were three leftover overt misunderstandings that were more difficult to classify and did not really fall into either of these two categories. For the time being, those misunderstandings have been placed in the "Other" category.

Gass and Varonis' proposed model for non-understandings identifies two parts of the misunderstanding that will be examined in depth here: the trigger and the indicator.

Indicators "signal that an utterance has triggered a non-understanding." An indicator can be identified as follows:

(1) S: Are you a student in your country?
H: *in my class?* ← **indicator**
S: in your country
(data from Gass and Varonis 2002, pg. 76)

The inappropriate response to the question tells the speaker that the hearer has not understood the question. The response "in my class" is an *indicator* that a non-understanding has occurred.

Triggers are "recognized only in retrospect…if it has been reacted to by the hearer." For example:

(2) S: *What is your name?* ← **trigger**
H: My name?
S: yeah
(data from Gass and Varonis 2002, pg. 75)

The hearer's reaction in Line 2 shows that "What is your name?" triggered the misunderstanding. That reaction is an *indicator* that a non-understanding has occurred. Only by the presence of the indicator would one know that there was a *trigger*.

Gass and Varonis previously identified four distinct categories of overt misunderstandings that I have found to be prominent in the intercultural medical setting by using triggers and indicators as identifiers. These are echo, direct question, silence, and inappropriate response as indicators of a non-understanding. Though Gass and Varonis use the word "non-understanding," I will from this point only use the word "misunderstanding" in the prose to eliminate confusion.

4.1.1.1 Echo

An echo can be an indicator that a misunderstanding has occurred. It means that either the speaker was not heard or that he or she was not understood.

Some examples of echoes that transpired during this study follow:

(3) PATIENT 08
PR: Ok. You haven't been wheezing at all?
PT: *Wheezing*?
PR: Making-you feel like you're making noises when you breathe. I don't hear any wheezing, but sometimes when we get a bad cough..
PT: no wheezing.

The patient repeats the word "wheezing" indicating to the provider that the word's meaning was unclear. In this case the provider recognized that the patient did not

understand what wheezing was and followed up with an explanation to help him[1] better understand. However, echoes are often overlooked and this type of follow-up does not always occur.

(4) PATIENT 05
PR: It's just what we call a little abscess
PT: Oh, *ab-scess?*
PR: (writes in chart) and is it real painful or just painful more to touch

In this case, the repetition of the word *abscess* was not recognized as an indicator by the provider. The patient reinforced the fact that he did not understand the meaning of "abscess" when he asks for clarification of this word during his debriefing.

4.1.1.2 Direct Question

Another type of overt misunderstanding previously discussed by Gass and Varonis (2002) is the direct question in which the patient will explicitly indicate that something is unclear. The category of direct question is expanded here to also include statements. Therefore they can be recognized by a direct question about what was said or a statement such as "I don't understand."

(5) Patient 17
PR: So that is for your allergies, correct?
PT: *Hm*?
PR: you take that one for your allergies? The nose spray?
PT: yeah.

In the following example, the patient asked a direct question without which this misunderstanding might have gone unnoticed and unaddressed.

[1] Because all of the health care providers were female, the providers will be referred to with the feminine pronoun "she" and the patients will all be referred to with the male pronoun "he" in order to eliminate confusion.

(6) Patient 03

PR: Ok so now it's gotten worse you have a productive cough, congestion, sinus drainage, um..
PT: no sinus drainage
PR: no sinus drainage? **[provider echoes]**
PT: *I don't know what sinus drainage is* **[patient direct question]**
PR: Ok well that's important to know

The provider in this case followed up with an explanation of sinus drainage and even made it a point to bring it back into context when explaining treatment, ensuring that the patient fully understood.

4.1.1.3 Silence

In everyday communication a silence can occur that is typically accompanied by a blank stare that says, "huh?" when someone has no idea what is being said. This also occurs during the medical interview. At times, the silence from the patients informs the provider that they did not comprehend everything that was said. Gass and Varonis call this "Silence as an indicator of non-understanding." Two examples are shown below.

(7) Patient 08

PR: So you're congested?
PT: (silence)
PR: you're full (motions to face and sinuses) um..lots of sinus pressure?
PT: yes yes a lot

(8) Patient 23
PR: Ok have you had fever?
PT: (silence-looks to husband who translates into Korean)
PT: uh no.
PR: temperature, no?
PT: no no
PR: Ok, chills or achey?
PT: (silence-looks to husband who again translates to patient)
PT: no no.

In the second example (8) the provider did not follow up on the silence, nor did she need to as the patient's husband was available to interpret for her. This silence presented a different and unique complication for the provider. The provider was left to assume that the husband has interpreted correctly and that the patient fully understood what was being asked.

4.1.1.4 Inappropriate Response

An inappropriate response can also be an indicator that a misunderstanding has occurred. In the following example, the patient was silent at first and then gave an inappropriate response.

(9) Patient 08
PR: Is your throat more sore in the morning when you first get up?
PT: (silence)
PR: or..throughout the day?
PT: yeah. **[inappropriate response]**

The answer to the question remained ambiguous until the patient later clarified that his throat is most sore when he first gets up in the morning.

(10) Patient 23
PR: (makes wheezing sound) are you um, I don't know, making noises when you breathe?
PT: yes. But nowadays uh it's good
PR: it's good?
PT: yeah but sometimes uh difficult
PR: you tight?
PT: yeah so I uh (makes motion of taking an inhaler)

In example (10), the patient's inappropriate response to the questions informed the provider that he does not understand the question or the provider's intent. The conflict comes with the patient's answer of "yes" to the question "Are you wheezing?" He then followed up with "but nowadays it's good" indicating that he perceived the provider's question to be one about his asthma or habitual wheezing when in actuality she is trying to determine whether or not those symptoms are present at this time as a result of the current illness.

4.1.1.5 Other Linguistic Misunderstandings

Other overt misunderstandings occurred that do not fit into any of the preassigned categories and must, therefore, become a category of their own for closer consideration. Here I will examine the three examples of these "other" misunderstandings. The following excerpt is taken from a few seconds of discourse between a patient and provider during the physical examination. The patient came in with symptoms of a urinary tract infection and while the provider was listening to his breathing, the patient brought up problems with an antibiotic prescribed the last time he was sick.

(11) Patient 13

PT: last time when I took uh antibiotic, the ten day thing, it didn't clear up my sore throat
PR: Oh. It didn't? Ok. I'll look at that again too. Ok?
PR: Other than the sore throat *are you still having some congestion or cough*?
PT: *no*
PR: just a sore throat?
PT: uh..sore throat has gone
…
PR: oh so the medicine did help or?
PT: didn't help but it was two three weeks ago
PR: Ok so how are you feeling now with that?
PT: I think it's Ok now
PR: It's Ok. Ok?
PT: I don't feel the sore anymore
PR: So it finally just went away?
PT: yeah by itself
PR: do you have any allergies?
PT: *I have some congestion*

In the third line, the provider asks if the patient is having any congestion or cough in addition to the sore throat and the patient answers "no". However in the last line, the patient states that he is having some congestion, without being asked. This symptom goes untreated in this case as the provider chooses to focus on the chief complaint, the urinary tract infection. Though the patient had different answers to the same question during different parts of the interview, there was no clear trigger than can be identified as having caused the misunderstanding.

The next example seems to resemble an inappropriate response in which the patient answers an either/or question by responding affirmatively to both parts. The patient's response in this case leaves the provider confused and she moves on to something else without trying to elicit a more specific response from the patient.

(12) Patient 10
PR: So is this older and starting to go away or is this new?
PT: I think it's new yeah. I think it's been there for while so I think it's getting better

This final example appears to reflect what is discussed in the literature review as the difference between the lifeworld and the voice of medicine. As the patient described his symptoms speaking from his own lifeworld, the provider brought him back to the voice of medicine by offering a more clinical word to describe what he is experiencing.

(13) Patient 11
PT: No, I don't have a headache, I am just shaking and like
PR: oh chills
PT: yeah chills

4.1.1.6 Cultural Misunderstandings

Certain aspects of a second language are more difficult for non-native speakers to understand. This patient who came to the clinic for an earwax rinse is a good example of cross-cultural misunderstandings.

(14) Patient 09
PR: You don't use a Q-tip, do you?
PT: no, no, no
PR: You don't cram it down in there do you?
PT: huh-uh
PR: good, good, good (begins exam)
PT: I don't use Johnson's but I-the-I mean like a what do you say like a swab, ear swab, is that bad?
PR: Nope. It's not bad, we'll be able to rinse that out in no time

A health care provider may not anticipate that a patient will associate "Q-tip" with a particular brand instead of using it to represent cotton swabs as a whole. Branding is often culture specific. Again, this does not only apply to interlocutors from different countries. If students from the southern United States went to New England and asked

for a "coke", they might be surprised when, instead of asking what kind, they are brought Coca-Cola. The same goes for the branding of other product names such as "Q-tips" and "Kleenex." We have become so accustomed to these items in our lexicon, we forget that someone else may think of these generic products only as cotton swabs or (facial) tissue (Clankie 2002). In the same way, providers also use idiomatic phrases that can be misunderstood by patients. When trying to assess whether a patient had a lot of fluid in their ears, a provider often asked "Does it feel like you're underwater?" Non-native English speaking patients had problems answering this question. Perhaps what being underwater feels like to the patient has nothing to do with pressure or with being sick. The concept is a difficult one to grasp and the question becomes unanswerable. Another example of this type of question that I noticed a lot was "Are you drinking enough water?" Providers consistently asked this question of their patients without ever quantifying what defines enough. Most patients answered "yes", a couple of patients answered "no" and they were told to increase their intake for hydration. One provider even instructs her patient to drink "plenty of water." Another patient suffered from a urinary tract infection and when the provider discussed how much water the patient should be drinking, a new cause for the infection emerged.

(15) Patient 13
PR: ..You need to drink so much water. This bottle right here (picks up the patient's water bottle) you need to drink at least four to five of these bottles a day.
PT: Ok
PR: Ok? That's a lot of water. Makes you go to the bathroom all the time
PT: I know

PR: so that might be the only thing that you need to rest is because you can't stop going to the bathroom. Other than that I think it should be Ok.
PT: oh Ok
PR: alright? So
PT: thank you. Sometime I'm doing some experiments that I can't stop for a while
PR: and that's another problem, that's where people end up getting urinary tract infections is if you don't empty that bladder when you need to, you could be more susceptible to having an infection start so be sure and try I know it nothing's ever possible all the time, but as much as possible, go to the bathroom when you need to Ok? So..
PT: yes yes

When the patient was later asked during the debriefing what the cause of the urinary tract might be, he did not mention that not emptying the bladder might have contributed to the infection.

There are other misunderstandings that link more directly to the patients' culture and can be identified in the discourse by viewing the transcript of the medical interview even without looking to the patient debriefing. Consider the following:

(17) Patient 03
PR: Are you drinking plenty of fluids?
PT: It's just that the water around here is just so cold, I don't know what's wrong with people here
PR: really?..Really?
PT: I tell you I just hate- I –I –put water in the microwave because it is just too cold for me.

After thoroughly expressing her surprise that the patient would not drink tap water, the provider went on to explain to the patient that he could substitute tea for water as a means of hydration if he cannot drink the water here.

More often, cultural misunderstandings go unnoticed and unaddressed:

(18) Patient 23
(provider is taking symptoms and has just asked the patient about fever and chills, the patient's husband is present and offers an explanation of the fever)
H: she didn't she didn't cover, she didn't cover the how do you say it
PT: (giggles)
H: (uses a Korean word)
PT: (motions like she is covering herself with a blanket)
PR: the blankets?
H: yeah, blanket, she didn't use-she didn't use blanket in the night so I think she
PR: Ok, a bit warm
H: had catch a cold
PT: (to H) you are not doctor

This medical interview at times played out more like a game of charades, but that was not the point of this cultural misunderstanding. The husband was using blankets to explain to the provider how his wife caught a cold--the cause of the illness. The provider thought that the husband was trying to tell her that she had not been using the blankets because she had a fever and was warmer than usual. The patient had already explained to the provider that she had not had an elevated temperature or any signs of fever. Many cultures, as seen in the literature review, attribute illness to not covering the body, the neck, or the head. In this case the misunderstanding was not lexical, but was about recognizing the topic under discussion, which can be affected by the culture of the interlocuters.

The following example demonstrates the cross-linguistic difficulties that occur between a patient from Thailand and his health care provider.

(16) Patient 13
PR: but you haven't run any fever
PT: no. not yet
PR: um and you don't want to
PT: no I don't want to

In the Thai language, when one is asked a yes or no question, it is customary to answer either "yes" or "not yet." It is very rare to answer this type of question with "no." A Thai speaker will always leave open the possibility that something may happen, no matter how remote that possibility may be. In this case, the patient's answer about his fever was not meant to imply that he wanted or expected to have fever, only that he had not yet had fever and there is still a possibility of fever in the future. Yet for an American English speaker, "not yet" would be understood to imply that there was an expectation that something would happen. Each participant's background linguistic knowledge determined how they viewed this exchange.

4.1.2 Covert Misunderstandings

In contrast to the previous data, covert misunderstandings are those that may occur during the medical interview but are not commented on at the time by the interlocutors due to the lack of an overt indicator. Instead, these misunderstandings are noticed only during the debriefing of the patient. With covert misunderstandings, the patient may feel that the provider misunderstood and must have known that a misunderstanding or missed connection occurred. It is extremely difficult to tell whether covert misunderstandings are linguistic or cultural in nature. However, linguistic triggers can normally be seen within the discourse and will, by their nature, be overt. Nonetheless, I found it extremely difficult to make a judgment about whether the

misunderstandings identified through the debriefing were to be attributed to cultural or linguistic factors; whether the non-understanding occurred as a result of language difficulties or if the patient's culture was not congruent with what the provider was explaining. Though a provider may be able to identify a linguistic misunderstanding through one of the indicators discussed previously, she would need knowledge of specific cultural issues to identify and address a cultural misunderstanding. For example, one patient from Japan was diagnosed with a sinus infection. When the provider asked what medicines he was currently taking, he presented a Prednisone inhaler. The provider asked him if the inhaler was for his allergies to which he answered "yes." This was the only time in the interview that allergies were mentioned and yet when the patient was asked during the debriefing what the diagnosis was, he answered "allergies" which was not what the provider had suggested. There was no way to know from the interview itself that the patient had misunderstood the diagnosis. In addition, he recalled during the debriefing that his prescribed treatment was to take medicine, but was not able to specify which medicine he was to take or how much of it. One can only hope that the patient did not leave thinking that the antibiotics were unnecessary because the steroids would be enough for his allergies.

In another case, a Korean student came to the clinic for a rash on her arm. The patient and provider talked about the many different causes for the rash. The provider finally came to the determination that the cause was unknown and treated the rash with a steroid cream. During the process of trying to pinpoint a cause, the patient and

provider discussed many different things including soap, fabric, scabies, or fleas. The patient asked if the tuna sandwich he had eaten might have caused the skin irritation.

(20) Patient 10
PT: I I thought um Ok um. I had a tuna sandwich this week
PR: mmmhmm
PT: and do you think that's affects my body um
PR: A tuna sandwich? It could..some people are allergic to it. However, If you had some of this two weeks ago, unless you can relate to the fact that you had tuna and it happened before and then you had tuna and it happened again, it probably isn't.
PT: Ok.

Despite this explanation by the provider, the patient still cited "food or fabrics" as the cause of her rash during the debriefing.

In this section, I have discussed a number of different kinds of misunderstandings that were identified and examined in the medical interview. Some of them were overt, some covert. Misunderstandings occurred as a result of linguistic triggers and misunderstandings from cultural triggers. The second half of the analysis uses the surveys and numbers to quantify the comprehension of the participants.

4.2 Quantitative Results

The data in this study were not enough to run an extensive statistical analysis, but nonetheless provided additional descriptions of the interaction between provider and patient. Although the study was not designed to be quantitative in nature, it is still able to provide minimal statistics that will both support the qualitative findings and reveal trends in the field for future areas of study. Linguistic studies dealing with medical discourse in the past have noted that the medical community are more responsive to quantitative results and have advised using numbers as often as possible to

communicate the findings of the study (Davidson 1999). This was the primary motivation for the use of quantitative methods in this study. The qualitative analysis was conducted by giving patients and providers Likert scale surveys to rate their own comprehension and satisfaction, as well as the perceived comprehension of the other party. The research assistant then watched the videos of the interview and patient debriefing and also rated the comprehension of each participant and their likeliness to adhere to treatment regimens. These scale responses were entered into a spreadsheet and transferred to SPSS to analyze patterns. Because the sample was small, correlations between native language and comprehension or religion and comprehension proved unfruitful, as many diverse languages and religions were represented among the 23 participants. Cross tabulations between similar questions, however, revealed statistical significance. Surprisingly, the most revealing statistical information emerged when comparing the research assistant's answers to those of the patient and provider. Tables with the responses for each question will be displayed in this section to give a better understanding of how each question was answered by the participants.

4.2.1 Provider Results

Five female health care providers participated in the study. One of them was a medical doctor and the remaining four were nurse practitioners. They all reported that their native language was English. None of them reported being bilingual or using a language other than English in any setting including home, work and with friends or family. Two of the providers were 58 years old, two were 44 years old and one was 30 years old. Their religious practices were mainly Protestant with one practicing Catholic

and one non-practicing Catholic. Before the study began, the providers were asked to comment on the biggest problems they have had in treating patients from different language backgrounds. Their responses varied, but a pattern of complications with comprehension and medications emerged from their answers, shown in the five points below. Each number represents the direct quote of one provider (PR) to the questions.

> **PR1**. *comprehension of instructions. Sometimes patients have difficulty expressing their needs/concerns--finding the right words to describe/discuss the situation.*
>
> **PR2**. *communication especially using slang or colloquial terms and also they use medicines from their country--labeled in another language*
>
> **PR3.** *difficult to understand, unable to find words*
>
> **PR4**. *uncertain if I correctly understand their problem and if they understand my questions and treatment*
>
> **PR5**. *specifics (like details/descriptions) during questioning; descriptions of pain (i.e. sharp/dull/cramping); some cultures don't have OTC meds available or they are not aware of what's available.*

In chatting with the providers during the observation period, it became clear that they all had experience with cross-cultural medical interviews. Each of them had an opinion about the patients' beliefs and the issues that these caused. In this survey, however, all of the providers mentioned language concerns: comprehension of instructions, ability to describe symptoms. None of them mentioned any concerns for cultural differences or medicinal beliefs that conflicted with the Western medical system.

After the medical interview with the patient was complete, each provider was given a quick survey to complete with three questions using Likert scale responses. Percents were calculated based on the number of providers who responded to the specific question. The health care providers reported that they understood the patient the majority of the time, with 90% reporting HIGH[2] comprehension (4 or 5 on the scale) of the patient and only 9% of the time reporting that they understood only some of what the patient was saying.

Table 4.1 Provider's Assessment of How Well She Understood the Patient

Response	Provider Understood Patient [E4] F(%) n=21
Completely Understood (5)	14 (66.67%)
Understood Most (4)	5 (23.81%)
Understood About Half (3)	0
Understood Some (2)	2 (9.52%)
Completely Didn't Understand (1)	0

In contrast, providers indicated an awareness that patients misunderstood. The providers reported that the patient completely understood them only 61% of the time, although 33% thought that the patient understood most, with only 4% reporting that the patient understood only some of what was said.

[2] HIGH comprehension indicates a rating of 4 or 5 on the Likert Scale of 1-5. Scores from 1-3 will be rated as LOW.

Table 4.2 Provider's Assessment of How Well the Patient Understood Her

Response	Provider Perception of Patient Comprehension [E5] F(%) n=21
Completely Understood (5)	13 (61.90%)
Understood Most (4)	7 (33.33%)
Understood About Half (3)	1 (4.76%)
Understood Some (2)	0
Completely Didn't Understand (1)	0

The providers also reported mostly high levels of satisfaction with only 4% saying that the interview was "Just OK." None of the providers said that they were dissatisfied with the medical interview.

Table 4.3 Provider's Assessment of How Satisfied She Was With the Visit

Response	Provider Self Reported Satisfaction [E6] F(%) n=21
Very Satisfied (5)	13 (61.90%)
Satisfied (4)	7 (33.33%)
It was Just OK (3)	1 (4.76%)
Unsatisfied (2)	0
Very Unsatisfied (1)	0

The providers were very generous in their scores for satisfaction and comprehension alike. Indeed, the providers often deal with patients from many different backgrounds and are likely familiar with the unique challenges that these patients presented. However, the patients' results showed that they rated the medical interview even higher than the providers.

4.2.2 Patient Results

The patients, 11 females and 13 males, were all university students visiting an on-campus health clinic. They ranged in age from 19-57, with most of them between the

ages 21-27. The patients were asked to indicate their native language or the first language they learned at home. The languages represented in the study were Bengali, Chinese/Mandarin, English, Hindi, Japanese, Kannada, Korean, Manipuri, Marathi, Russian/Ukrainian, Spanish, Thai, and Vietnamese. Only two of the patients, however, reported having previously used the services of an interpreter in a Western health care setting. The patients were also asked about their current religious practice. While the majority of the patients stated that they practiced no religion, the remaining patients practiced a variety of religions including Buddhism, Catholicism, Christianity, Hinduism, and Islam.

The patients were given a mirrored version of the same three questions that the providers answered after the interview, rating their comprehension, perceived comprehension of the provider, and satisfaction. All patients self-reported a high level of comprehension in the medical interview, 66% reported that they completely understood their provider. This is interesting considering that each non-native English speaking patient had from 1-7 misunderstandings during their medical interview.

Table 4.4 Patient's Assessment of How Well He Understood the Provider

Response	Patient Understood Provider [C16] F(%) n=21
Completely Understood (5)	14 (66.67%)
Understood Most (4)	7 (33.33%)
Understood About Half (3)	0
Understood Some (2)	0
Completely Didn't Understand (1)	0

Almost 76% of patients thought that their provider could completely understand them.

Table 4.5 Patient's Assessment of How Well He Thought the Provider Understood Him

Response	Patient Perception of Provider Comprehension [C17] F(%) n=21
Completely Understood (5)	16 (76.19%)
Understood Most (4)	5 (23.81%)
Understood About Half (3)	0
Understood Some (2)	0
Completely Didn't Understand (1)	0

The patients were completely satisfied with their visit 67% of the time, reporting only slightly higher satisfaction than the providers (61%). None of the patients gave a less than HIGH rating for their satisfaction with the visit.

Table 4.6 Patient's Assessment of How Satisfied He Was With the Visit

Response	Patient Self Reported Satisfaction [C18] F(%) n=21
Very Satisfied (5)	14 (66.67%)
Satisfied (4)	7 (33.33%)
It was Just OK (3)	0
Unsatisfied (2)	0
Very Unsatisfied (1)	0

The patients appeared to be satisfied and thought that the providers communicated clearly. The patients always rated the provider's comprehension as greater than their own. There could be a number of explanations for why patients scored their comprehension and the comprehension of the providers as high when so many misunderstandings occurred. Two of these explanations will be discussed in the following chapter, including the possibility that a "double covert" misunderstanding may exist in which the patients are not aware of exactly how much they do not understand.

4.2.3 Research Assistant Results

The research assistant is a native English speaking Nursing student whose medical expertise gave her great competence in making judgments about the medical interview and debriefing. The research assistant had two tasks to complete in order to evaluate the patient's comprehension of the medical interview. The first was to watch the video of the medical interview and rate how well she herself could understand the patient and the provider (Appendix G). This was to provide a baseline as to how clear each participant was. She was also asked, based only on the medical interview, how well she thought the patient understood the diagnosis and treatment as it was explained to him. Viewing the medical interview allowed her to observe the patient describing symptoms and medical history as well as the providers explaining the diagnosis and treatment. She was able to observe, through video, everything that each participant contributed. She then viewed the debriefing video. The debriefing was a time in which I asked the patient to explain why they came to the clinic. They were also asked what the doctor said the problem was, what caused it, and how they proposed to treat it. Finally, the patients were asked if they planned to follow the treatment prescribed by the provider. The research assistant then completed a second survey (Appendix H) rating the patient's comprehension again based on the recall of the debriefing. She examined the patient's comprehension of the diagnosis, the cause, and the treatment as well as his likeliness to adhere to the treatment as prescribed.

The purpose of the research assistant was to provide numbers quantifying the patient's comprehension in order that the providers in the clinic could better understand

the findings. What emerged was far more revealing than expected. The debriefing time proved to be critical in assessing how well the patient understood what had happened during the medical interview. On some questions, the research assistant's response from the first survey to the second dropped by almost 50%. The medical interview itself was not sufficient to assess patients' comprehension. For example, concerning the question "How well does the patient understand the treatment," after only the medical interview the research assistant rated 47% of the patients as completely understanding the treatment. After viewing the medical interview and debriefing, the research assistant indicated only 28% of the patients completely understood the treatment. The results indicate that not only are patients leaving without a proper understanding of their treatment regimen, but also that the medical interview alone does not inform the provider of the patient's lack of understanding.

Table 4.7 RA's Response to How Well the Patient Understood the Treatment Before and After Viewing the Patient Debriefing

Response	Time 1 F(%)	Time 2 F(%)	Difference F(%)
Completely Understood	10(47.62%)	6(28.57%)	4(19.05%)
Understood Most	9(42.86%)	10(47.62%)	-1(4.67%)
Understood About Half	2(9.52%)	5(23.81%)	-3(14.28%)
Understood Some	0	0	0
Completely Didn't Understood	0	0	0

Time 1= Following Review of Medical Interview before viewing debriefing
Time 2= Following Review of Debriefing Video

The debriefing proves to be a necessary component of the interaction between the provider and patient based on the patient's inability to accurately recall what happened during the interview.

The Research Assistant was also asked after viewing both videos how well the patient understood the cause of the illness. Her judgment on this question is based on not perceived comprehension during the medical interview, but upon how well the patient answered the question "What did the doctor say the cause of your illness was?" The research assistant rated 9% as completely not understanding the cause of the disease and almost 43% only understood some. Only 4% of the patients completely understood the cause of the disease while 42% understood most and 9% understood about half.

Table 4.8 RA's Response to How Well the Patient Understood the Cause of the Disease

Response	RA: "How well does the patient understand the cause of the disease" (post-debriefing) [H2] F(%) n=21
Completely Understood (5)	1 (4.76%)
Understood Most (4)	9 (42.86%)
Understood About Half (3)	2 (9.52%)
Understood Some (2)	7 (33.33%)
Completely Didn't Understand (1)	2 (9.52%)

Although around 47% of the patients were given a HIGH rating of either 4 or 5 on this question, it is more important to note that 52% were given a low rating and left the medical interview without understanding what might have caused their disease. This is especially shocking when compared to the providers giving 95% of the patients a HIGH rating of comprehension after they left the medical interview.

Equally as significant are the ratings that the research assistant gave the patients for comprehension of their treatment. The research assistant rated 23% of the patients as only understanding about half of their treatment regimens. The remaining 76% of

patients' comprehension of treatment was rated as HIGH (4 or 5 on the scale). Nonetheless, this data tells us that almost 25% of the patients who left the clinic did not understand all or most of the treatment that was prescribed to them.

Table 4.9 RA's Response to How Well the Patient Understood the Treatment

Response	RA: "How well does the patient understand the treatment" (post-debriefing) [H3] F(%) n=21
Completely Understood (5)	6 (28.57%)
Understood Most (4)	10 (47.62%)
Understood About Half (3)	5 (23.81%)
Understood Some (2)	0
Completely Didn't Understand (1)	0

On the issue of likeliness to adhere to the treatment, patients fared a little better with 42% judged as "Will Adhere" and 42% judged as "Very Likely to Adhere." Only 14% received a score of 5 or "Likely to Adhere."

Table 4.10 RA's Response to How Likely the Patient was to Adhere to the Treatment

Response	RA: "How likely is the patient to adhere to the treatment" (post-debriefing) [H4] F(%) n=21
Will Adhere (7)	9 (42.86%)
Very Likely to Adhere (6)	9 (42.86%)
Likely to Adhere (5)	3 (14.29%)
May or May Not Adhere (4)	0
Unlikely to Adhere (3)	0
Very Unlikely to Adhere (2)	0
Will not Adhere (1)	0

Though the patients were asked if they planned on adhering to the treatment regimen, this estimation is mostly the opinion of the research assistant based upon the patient's comprehension of treatment and perceived apathy.

The research assistant played an invaluable role in this portion of the analysis. Through her observation and surveys, I was able to see just how critical the debriefing period is to verify the patient's comprehension. She also provided numbers that led me to examine two vital areas of the medical interview more closely: the cause of the illness and the treatment regimen.

This chapter has shown the qualitative and quantitative results of the study. The different types of misunderstandings that can occur in the intercultural medical interview have been explored. The results of the surveys have also been analyzed and compared in this chapter. The data that emerged from the two methods of analysis confirmed the same information: there were a number of misunderstandings that occurred during these medical interviews. Some of them were due to linguistic factors while some of them were caused by cultural differences. What these misunderstandings had in common was that most of them could have been brought to the surface of the medical interview and addressed. These results, the implications, and potential repairs will be discussed further in the following chapter.

CHAPTER 5

DISCUSSION OF DATA RESULTS

This study examined the discourse that occurs between native English speaking health care providers and non-native English speaking patients. The methodology and results of the study have been laid out in previous chapters. This chapter will further explore the results that were revealed in Chapter Four. This chapter will be divided into three parts, discussing each contributor to the data individually. In the first two sections, I will elucidate the results that are relevant to the health care providers and the patients. In the third section, I will discuss the results from the research assistant, including comparing her reporting to that of the patients and providers. The final section will address the implications that can be drawn from this analysis as well as potential discourse repairs to address the major issues.

5.1 Discussion of Provider Results

The providers' results were analyzed using two pieces of data: the transcript of the medical interview and their post-interview surveys. The transcript was used for the qualitative analysis and the surveys were used for the quantitative results. The qualitative analysis used the discourse from the medical interview to identify and code overt and covert misunderstandings.

5.1.1 Qualitative Results

Three types of misunderstandings were identified when looking at the data: overt, covert, and double covert. The misunderstandings identified could be caused by linguistic or cultural triggers. Picking up on the indicators by which overt misunderstandings were recognized requires a keen awareness by the provider of what is being said and how well the patient comprehends. Overt misunderstandings may be either addressed by the hearer, or go unaddressed, or be unnoticed. Around 90% of the time, a participant heard an indicator and responded, offering the necessary clarification. In this study, these interactions labeled as addressed overt misunderstandings. For example, one of the patients explained that he was not able to drink the water in America because even the tap water was too cold. His health care provider discussed this issue further and offered alternatives for hydration such as drinking warm tea or juice.

Approximately 10% of the time, an indicator was present, but was not recognized by the hearer. This type of misunderstanding was labeled unaddressed or unnoticed because it was unclear whether the provider heard and chose not to respond or if she did not notice the comment at all. Such was the case with the patient and the Q-tip in example (14). The patient explicitly stated that he used cotton buds and not "Johnson and Johnson," but his statement was not heard by the provider and was, therefore, not addressed. It is unthinkable to most that providers may hear an indicator and ignore it completely, but this happens also. In this study, such a case was a rarity as the providers were very tuned into the patients and their needs. Unfortunately, providers

do not always have time to address every need and comment from the patient so misunderstandings can go unaddressed. The providers also made it clear in their biographical surveys that, at times, they have a hard time understanding exactly what a patient needs or expects. One provider participant in the study complained that patients come in with unwarranted symptoms, without first having tried to treat the symptoms with over the counter medications. These kinds of problems can make providers less patient and attentive to the needs of those patients.

Covert misunderstandings were able to be identified only after the interview was complete by viewing the debriefing. Covert misunderstandings are those that do not reveal an overt indicator during the course of the discourse. Rather, the problems emerge only when the patients are asked specific questions that require them to recall certain aspects of the medical interview. When the answers to the questions do not align with what was said during the medical interview, a covert misunderstanding occurred. There were 15 covert misunderstandings identified in this study. In order for providers to become aware of these misunderstandings in their future encounters with patients, they need to ask questions similar to the ones that were asked during the debriefing, making it necessary for the patients to restate what was explained to them.

Cultural overt misunderstandings can be addressed only when one recognizes that the misunderstanding is due to a cultural belief or presupposition and addresses it accordingly. The providers in this study did an excellent job of recognizing and addressing cultural issues that were brought up during the course of the medical interview. Only 2 out of 9 of these types of misunderstandings went unaddressed.

Identifying misunderstandings attributed to the culture of the patient does not require detailed knowledge of the cultures of every patient who walks through the door. The provider only need be receptive to the patients' responses and recognize that cultural differences may need extra attention (Carrillo et al. 1999, Ferguson and Candib 2002, Flores 2000). By eliciting information from the patients about their symptoms, what they believe about why they are sick, and what their treatment expectations are, the providers may reveal potential issues to more effectively address the patient's presuppositions as they relate to the treatment at hand.

In analyzing the transcripts of the medical interview, I observed a few patterns of provider behavior worth noting because of their potential impact on the discourse. These were interruptions, defaulting to technical language, and the use of closed-ended questions.

5.1.1.1 Interruptions

It is sometimes difficult in an intercultural exchange to wait for interlocutors speaking in a second language to find the words in order to complete their sentences. It takes a great deal of patience to interact in this way. At times, providers did not wait for patients to complete their descriptions of their illnesses, but rushed to help them complete their sentences. In this study, those interruptions proved to be detrimental to the medical interviews in which they occurred. In some cases, such as the one below, the patients were misunderstood and were unable to provide complete information. This affected both the patient's comprehension of their diagnosis as well as the cause of the disease.

(21) Patient 01
PR: What were you doing when it first started? Were you exercising, or…
PT: No, this, I haven't exercised like all semester. I think like [maybe I]
PR: [Oh so] you don't recall a particular injury?

The provider's rush to complete the sentence here disallowed the patient the time to complete his thoughts. Though he had an idea of what might have caused the injury, he was never able to finish the sentence and answered the question "So you don't recall" with a "yeah."

5.1.1.2 Default to Technical Language

Oftentimes when a provider appeared at a loss attempting to explain a procedure or diagnosis to a patient, she would default to technical language instead of breaking down the explanation into simpler terms. Consider the following example

(22) Patient 23
PR: alright, well oftentimes, when you get these kind of symptoms, it's a virus, Ok?
PT: oh
PR: it's just called a viral respiratory infection because your throat is so sore and it's red, not really real red, just a little red, I think we ought to do a culture just to make sure you don't have strep throat.
PT: mmm
PR: uh or uh where they swab your throat and then and make sure you don't have streptococcal, it's an infection, a bacterial infection that sometimes colonizes in the throat

The provider in this exchange begins to explain the diagnosis and need for further testing, but soon realizes that the patient does not understand. Instead of restating her explanation in more simple terms, she defaults to technical language that is perhaps more comfortable for her in explaining and processing this type of information. As discussed in the literature review, Schwartzberg claimed that health information is

usually provided at the college level, while most Americans read at an eighth grade level (2006). Although these patients were students at a university, they were not native speakers of the language. They cannot be expected to comprehend and process medical language at the college level.

5.1.1.3 Closed-Ended Questions

Providers in the intercultural interview asked far more closed-ended questions to check comprehension than they did in interviews with native English speakers. Questions such as, "Do you understand?", "OK?", and "Does that make sense?" were very common throughout the interview, most prevalent during the explanation of the diagnosis and treatment regimen. The obvious problem that these questions presented was that they require an answer of either yes or no. In the context in which they were asked, the response is always a positive one (yes or OK). Consider the following examples:

(24) Patient 22
PR: you've already got the decongestant factor in there
PT: Ok
PR: so a suppressant expectorant thing we've already got the expectorant going on with the liquibid so we're just looking for a plain suppressant
PT: Ok
PR: does that make sense
PT: yeah

(25) Patient 05
PR: I want you to use a warm, real warm wet washcloth
PT: Ok.
PR: do you know what I mean?
PT: yes
PR: and put it up there and sometimes what that does is causes it to get

from back up here just to a little tiny pinpoint and it might actual cause it to drain a little of that out
PT: Ok.
PR: Ok?
PR: by putting real heat, wet heat, kind of draws that out and then put a little bit of a ointment on that too. Ok?
PT: Ok.
PR: and then the pill, the medicine you're gonna take is two times a day. Ok? so...
PT: Ok.

Research in the field of medical communication has identified closed-ended questions as being indicative of a physician-centered interviewing model and leading to decreased patient satisfaction (Hall et al. 1987, Levenstein 1989, Rosenberg 1997). In contrast, the patient-centered model uses open-ended questions that encourage patients to express their ideas, expectations, and feelings (Borrell-Carrio et al. 2004, Clark 1999, Levenstein 1989). Hall et al. found that closed-ended questions "control patient responses and clearly indicate physician dominance in directing the interview (1987:409). Using open-ended questions will not only open the interview for patients to express their own ideas, this strategy also provides the provider with insight into the patient's thoughts and comprehension of what is being discussed.

5.1.2 Quantitative Results

The first question that the providers answered on a scale of 1-5 was "How well did you understand the patient?" None of the providers answered that they completely did not understand their patients (1 on the scale). Only 9% of the time did the providers indicate that they understood only some of what the patients said (2 on the scale). It was not clear through this survey alone whether the providers are purporting to have left the

interview without being completely clear on what the patient was communicating or whether it took more time to work through what the patient was trying to convey and eventually they understood. Based on the survey information combined with the transcripts and discussions with the providers afterwards, a conservative conclusion is that at times, providers left the interview confused about what the patient was trying to say. However, the providers continued to report that the majority of the time they completely understood the patients or understood most of what they were saying. These high ratings indicate that the providers were attentive to the patients and that the patients communicated clearly despite the fact that English was not their first language.

The nature of the research itself cannot escape mention here. The providers knew that there would be some sort of rating for comprehension, especially after they completed their first survey. The health care providers would, by the nature of being involved in such a project, be more aware of how the patients are communicating. Such behavior can be attributed to the Hawthorne Effect in which the "presence of interviewers and observers was itself a change in the conditions of work" (Franke and Kaul 1978:624). I would also imagine that there would be a bit of a stigma for the providers in implying that maybe they did not fully or mostly understand the patients that they treated.

The results were surprising when the providers rated the patients' comprehension by answering the question, "How well did the patient understand you?" The providers still gave the majority of patients a HIGH rating (4 or 5), fewer patients completely understood (61%) and the number of patients rated as understanding most

of what the provider said (33%) was the same as the patients' own rating of their comprehension. Although one patient was scored as only understanding about half, tt was surprising, particularly after viewing the videotapes, that the providers did not rate any patients as completely not understanding. One would expect with 25 overt misunderstandings identified, more providers would view fewer patients as having a high level of comprehension.

The providers also tended to be very satisfied with the medical interviews. Only 4% said that their medical interview was "just OK." This seems to be congruent with the levels of comprehension. The providers rated high levels of comprehension and satisfaction for the medical interviews. There was, however, one anomaly. It is worth noting the exception of one provider that struggled to comprehend her patient and to make herself understood. Although she rated both her comprehension and the patient's comprehension at "2" or "Understood Some," this provider reported that she was "Satisfied" with the interview, rating her satisfaction at a "4." This apparent contradiction reveals an important insight into what providers are confronting in these intercultural medical interviews. I can suggest two plausible explanations for this provider's satisfaction rating. Either this interview proved so difficult that even when she only understood some of what the patient was saying, she was satisfied, or else she had a fear of rating her satisfaction any lower. One would think that if a provider were dissatisfied in any way with the medical interview that she would feel compelled to stay and work with the patient until assured that everything was completed in a satisfactory manner. As is becoming increasingly common in the doctor's office or health clinic,

managed care may not provide the time and opportunity for a provider to work with a patient until she is completely satisfied that the patient is leaving educated and with a full comprehension of the diagnosis and treatment (Mechanic and Schlesinger 1996, Blendon et al 1998, Grembowski et al. 2005). Nonetheless, the satisfaction rating does not complement the judgment of comprehension in this case and is quite concerning.

5.1.3 Conclusion of Provider Discussion

Both the qualitative and the quantitative analysis gave unique insight into the provider's perspective and communication during the medical interview. The qualitative analysis, while mostly addressing patient indicators, also revealed a lot about the providers' behavior and how it affects patient comprehension. Although the survey responses indicated that the providers perceived patients as having understood all or most of what they were saying, an examination of the transcripts showed that patient comprehension was far less than what the providers thought. It would have been interesting to get the providers' opinion on the patient debriefing that occurred after the medical interview. The providers in the study were not aware of what questions were being asked during the debriefing and such revelation might have affected future interviews in the study. A more thorough post-interview survey similar to the one completed by the research assistant might have been able to further clarify how well the providers thought the patients understood the causes and treatment of the illness. However, given that the providers gave a high rating to patients' general comprehension, it is unlikely that these additional questions would have been more revealing than the current survey.

5.2 Discussion of Patient Results

The patients' results were analyzed using three pieces of data: the transcript of the medical interview, the transcript of their debriefing, and their post-interview surveys. The transcripts were used for the qualitative analysis and the surveys were used for the quantitative results.

5.2.1 Qualitative Results

The qualitative analysis for misunderstandings was conducted by searching for indicators within the discourse and the patient debriefing that a misunderstanding had occurred. The majority of these indicators came from the patients, not the providers. At times, the patients only smiled and nodded as the provider explained the diagnosis and treatment to them, neither indicative of comprehension nor of a misunderstanding. The patients nodded when asked a question about their own comprehension an average of 2 times per interview. Fortunately, the patients also at times used indicators to let the provider know that their comprehension was not complete. Even silence as a response is better than false agreement in the medical interview because it lets the provider know that the information may not have gotten through. This study found that when patients were silent giving only a nod, "mmhmm", or "OK" while the provider was explaining the diagnosis, those patients were less likely to be able to accurately recall their treatment regimen during the debriefing period. For instance in example (22) in section 5.1.1.2, the patient was able to recall only one-third of the prescribed treatment regimen when asked during the debriefing.

Providers must be aware of what patients need to know and what they do not understand for effective communication to occur. The presuppositions that the patients bring with regards to the power relationship can lead the patient to think that it is not appropriate to question or challenge what the provider is saying (Fuller 2003, Maynard 1991, Weston and Brown 1989). This becomes a problem when the cultural misunderstandings are examined more closely. Only two patients spoke up and explained during the medical interview why they did not agree with something that was said or why they did not intend to comply. The majority of these misunderstandings were not disclosed until the debriefing period and were, therefore, classified as covert. It is possible that the patients were not even aware that their perceptions of the cause of their illness and the treatment were not comparable with what the providers had explained.

5.2.2 Quantitative Results

The patients were given three Likert scale questions to answer after their medical interview that mirrored the questions answered by the health care providers. The objective in asking the same questions was to see if the perceptions of participants agreed after they left the medical interview. For the most part, the patients and providers had similar responses for their interviews. However, the patients gave higher ratings than the providers on all questions. The patients had no LOW ratings on any of their surveys and always answered with a 4 or 5. The patients always rated the provider's comprehension as the same or greater than their own. No patient thought that he understood the provider better than she understood him. Patients reported that they

completely understood the provider 66% of the time compared to their perception of provider comprehension at 76%. These findings could be attributed to the patients' hesitancy to challenge the authority or intelligence of the providers as authority figures although the motivation for survey responses was not explored in this study. The patients also left the interview more satisfied than the providers. 66% of the patients were very satisfied with the medical interview, with the remaining patients rating their satisfaction as "satisfied." It is interesting that the patients, as the consumers in this situation, rated the health care providers so high. These ratings were unpredictably high considering the number of misunderstandings that were identified from the transcripts of the medical interview and debriefing. I would have expected that patients would be less satisfied with the interview when their perceived causes of the illness and recall of treatment did not agree at such a frequent rate. Each patient had anywhere from 1-7 misunderstandings. That brings up an alternate explanation for the patients' survey responses. It is possible that the patients thought that they completely understood everything that was said in the medical interview, but in actuality they did not understand. With that possibility in mind, I have proposed a third category of misunderstanding to account for this phenomenon: the "double covert" misunderstanding.

5.2.2.1 "Double Covert"

Patients consistently appear to overrate their comprehension of the medical interview. This is determined by comparing their Likert scores from the surveys to those of the provider and the research assistant. While patients rated their own comprehension

as HIGH (4 or 5) 100% of the time, the research assistant rated their comprehension much lower after viewing the interview and debriefing. The patients' recall of the medical interview compared to the actual transcript revealed that most of them do not "completely understand" even though they ranked their comprehension as such. Only 4 patients were found to have no covert misunderstandings and all of these patients were at the clinic for follow-up visits or routine treatments such as wart treatment. For example, patient 22 rated his comprehension as 5 "completely understood," but when the research assistant was asked how well he understood the cause of his disease, she rated his comprehension at 1 or "completely didn't understand." This pattern was consistent among the patient and research assistant surveys. There are two explanations that I have explored to explain this finding.

The first is the difference in power in the relationship. Patients may be hesitant to report a score that may reflect negatively upon the medical visit or health care provider. This is an issue regarding the power structure of the medical institution itself as discussed in the literature review (e.g. Ten Have 1991, Barton 1996, and Ainsworth-Vaughn 1998). These researchers found that patients are typically hesitant to ask questions of the provider or to question her authority. This undoubtedly contributed to the patients' responses. Especially within some individual cultures, the patients may feel that they are unable to speak freely about their experience when this honesty can be seen as disrespectful criticism of the provider or institution.

The second explanation is that the patients do not recognize that they do not understand and their ratings reflect acquiescence on their part. I propose the possibility

that there may be a "double covert" misunderstanding at work here. Patients may misunderstand without knowing that they misunderstand. In this case, the misunderstandings may not be recognized in the interview, but are revealed in that patients rate a HIGH level of comprehension but were unable to recall aspects of the medical interview during the debriefing. This is an important problem with far-reaching implications. If a patient leaves the medical interview and thinks he understands everything that was explained to him, the consequences could be dire if said patient does not fully understand the treatment regimen prescribed or the cause of the disease.

5.2.2.2 Comparison of Non-Native English Speaking Patients and Native English Speaking Patients

A comparison group of two native English speaking patients were also recruited to participate in the study. Though small, this purpose of this set is to compare the misunderstandings and level of comprehension to the non-native English speaking group of patients in order to judge whether or not the native language of the patient makes a difference.

In reviewing the transcripts, no overt misunderstandings were identified when the patient was a native speaker of English. The patients were very clear and able to describe their symptoms without being prompted. While in an interview with a non-native speaker the provider might ask such questions as "Do you have sinus drainage?" and "What color is it-green or yellow or white?" The native English speaking patients offered this information at the outset of the medical interview. The following native

English speaking patient offers this information with almost no prompting from the provider.

(25) Patient 05
PR: How are you feeling?
PT: Not great. I came here..I guess it was about two weeks ago for a virus-type thing and got some cough syrup and decongestant and I really felt like completely fine for almost a week and then…I think it must have been stuck in there and I did have a low fever yesterday. I've had a lot of congestion and a painful cough again and um..
PR: What are you taking for it?
PT: Um Mucinex for the cough and Tylenol like cold and head for the sinus stuff. The sinus drainage has been yellow and sometimes almost brown.

The native English speakers appear to know more about what to expect out of the medical interview and tend to preempt most questions from the provider offering information and asking relevant questions. These patients stated their expectations throughout the interview for treatment and diagnosis. Though there were no identifiable misunderstandings in the medical interview, the research assistant still judged the recall of these patients to be less than the level at which they rated their comprehension.

Both native English speaking patients rated their comprehension and the perceived comprehension of the provider as '5' or "Completely Understood". The research assistant also gave scores of '5' after viewing the medical interview. Her opinion changed, however, after viewing the debriefing. After viewing the debriefing the first patient was given a 4 (Understood Most) by the research assistant when she was asked how well the patient understood the cause of the disease. The second patient fared even worse according to the research assistant. When asked how well the patient understood the diagnosis, the assistant answered 4 (Understood Most). The patient only

received scores of 3 (Understood About Half), however, when asked to recall the cause or the illness and the prescribed treatment.

The numbers show that while the native English speaking patients generally left with a greater comprehension than the non-native English speaking patients, their comprehension was far from perfect. Even in an interview with shared language and culture misunderstandings will occur and patients will, at times, be unable to recall every aspect of the medical interview.

5.2.3 Conclusion of Patient Discussion

In analyzing patient comprehension, the combination of qualitative and quantitative analysis provided critical insight into the patients' perceptions of the medical interview. The quantitative analysis revealed that the patients felt that the providers understood them well and communicated effectively. The qualitative results, however, contradicted these findings by showing a number of different misunderstandings that occurred throughout the interviews. Though the study was not designed for follow-up, it would be interesting to see how many of the patients completed their treatment regimen after leaving the clinic. All of the patients, when asked, stated that they would comply with the regimen though most of them were not able to restate what their treatment was after the interview. The research assistant's assessment revealed a different perspective of how well the patients understood the causes of their disease as well as the treatments prescribed.

5.3 Discussion of Research Assistant Results

The research assistant's role was to watch the videos of the medical interview and debriefing and complete surveys on how well she thought the participants understood each other. Her surveys were not originally designed to compare to any of the other pieces of data. What she found became increasingly important as it was compared to the responses of the health care providers in particular. This section will examine how the research assistant's results compared to those of both the providers and the patients.

5.3.1 Comparison of Provider and Research Assistant Reporting

After reviewing the debriefing of the patients, the research assistant was asked to evaluate the patients' comprehension of specific aspects of the medical interview such as treatment regimen and cause of the disease. This process enabled the research assistant to make judgments about exactly which parts of the interview were not fully comprehended by the patients when they left the medical office and to help identify the trouble areas for patients and providers. Three main areas of patient comprehension were broken down for the research assistant to evaluate: cause of the disease, diagnosis, and treatment regimen.

By far, the biggest problem that patients left the clinic with was how frequently they failed to correctly recall the cause of their illness. The providers and the research assistant did not agree on how well the patients understood this aspect. The research assistant reported 48% (9) of the patients' comprehension of the cause of their disease

as lower than the ratings providers gave. The following figure shows the research assistant's ratings when the providers were reporting patient comprehension as HIGH.

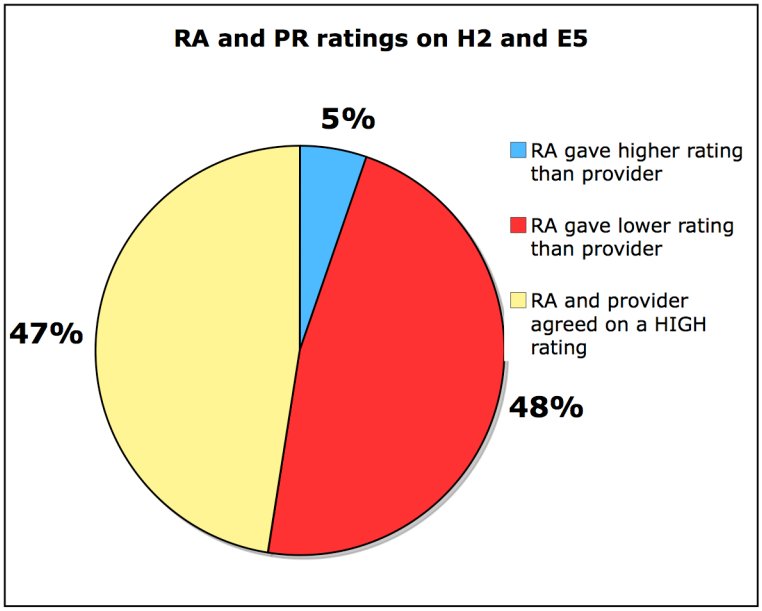


Figure 5.1 Research Assistant and Provider ratings to questions H2 and E5: Shows the Research Assistant's Reponses to the Question "How well did the patient understand the cause of the disease" when the Provider gave the patient a high rating of comprehension.

Clearly there is a huge discrepancy here. The yellow area indicates the percentage of time that both the research assistant and the provider gave a high rating. The red area shows the percentage of time that the providers rated patient comprehension higher than the research assistant did. The research assistant had an advantage in that after the provider left the room the patient was explicitly asked what they thought the cause of the illness was and what the provider said might have caused it. The provider only had the medical interview to use as her reference for answering the question. This difference was maintained so the findings reflected the reality of the practice environment. The

provider always has only the medical interview to assess how well the patients are comprehending.

The second biggest problem for patient comprehension was the comprehension of the treatment regimen. Again, the providers overestimated the patients' comprehension of the treatment when they left the medical interview. During the debriefing, patients were asked to repeat back the treatment regimen that was prescribed to them. As previously discussed, after viewing this debriefing, the research assistant rated only 28% of the patients as completely understanding their treatment. The research assistant ranked patient comprehension of treatment lower than the providers 32% of the time (6 patients). The figure below shows the research assistant's ratings when the providers were reporting patient comprehension as HIGH.

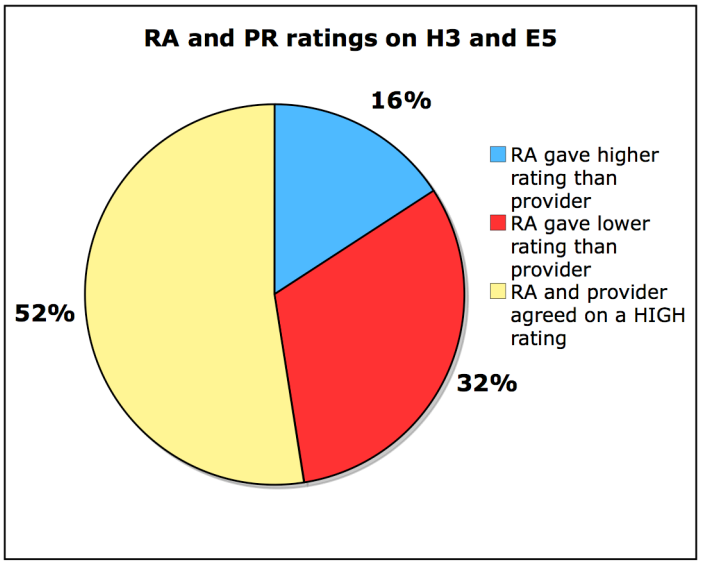


Figure 5.2 Research Assistant and Provider Ratings to questions H3 and E5: Shows the Research Assistant's Reponses to the Question "How well did the patient understand the treatment prescribed" when the Provider gave the patient a high rating of comprehension.

The yellow area indicates the times that the research assistant and provider agreed on patient comprehension. In contrast, the red area indicates the number of times that the research assistant gave a low rating while the provider rated patient comprehension as HIGH. The blue area represents the number of times that the RA rating was actually higher than the provider rating. Such a high inability to recall the treatment is alarming when we consider that this reflects how well patients understand the medicines that they are given and how to take them.

The third issue of disagreement between the provider and the research assistant's reporting is the issue of the diagnosis. The patient was asked during the debriefing what the doctor said was wrong with them. In this case, the research assistant ranked the patient's comprehension of the disease as lower 37% out of the interviews for which the providers marked patient comprehension as HIGH (7 patients).

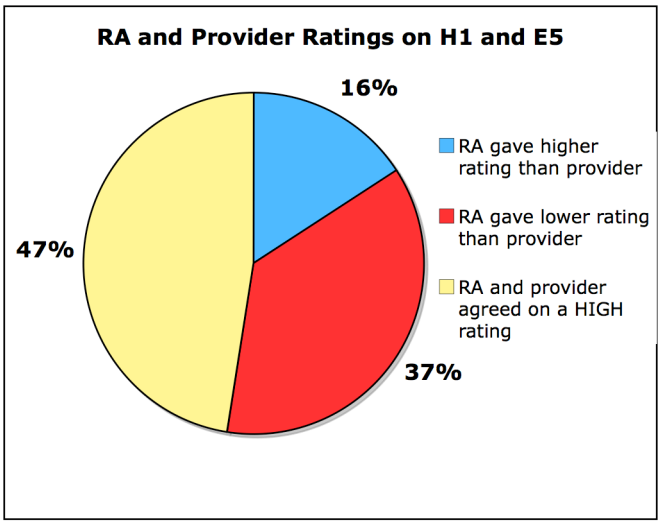


Figure 5.3 Research Assistant and Provider Ratings to Questions H1 and E5: Shows the Research Assistant's Reponses to the Question "How well did the patient understand the diagnosis" when the Provider gave the patient a high rating of comprehension.

Though the discrepancy was not as large as in the previous two questions, the data still show that the debriefing period offered crucial insight into the patient's comprehension. The research assistant's assessment validated the idea that the medical interview alone was not providing enough information to the provider about the patient's comprehension.

Before she viewed the debriefing videos, the research assistant viewed the videos of the medical interview and rated her own comprehension of the participants. When rating how well she understood the patients, the research assistant ranked the patients lower than the providers did, although most of the patients received a HIGH rating. The interesting finding comes when the research assistant was scoring her own comprehension of the health care provider. Most of the time, she was able to rank her

comprehension of the provider as "completely understood." After all, the research assistant is a Nursing student with a background in medical fieldwork and she is a native English speaker, something that she shares with all of the providers. In one instance, however, the research assistant rated her comprehension of the provider as a "3" or "understood about half." She did not clearly understand the provider's discussion of current medications and whether they should be continued or not. After reviewing the video a number of times, she was still unable to understand the provider's intentions.

Although the study was not specifically designed to compare the answers that each of these participants gave on their surveys, the discrepancies between the answers that the research assistant and the provider gave led the study in a clear direction and revealed which areas of the medical interview are most troublesome for comprehension: the causes and treatments of an illness.

5.3.2 Comparison of Patient and RA Reporting

The research assistant listened to the medial interview and the debriefings and then ranked how well the patient understood more specific aspects of the interview. These questions that were answered by the research assistant will be compared to the patients' answers to the question, "How well did you understand your doctor today?" (see the full survey in Appendix C). There was no direct parallel to this question, rather the research assistant's answers were intended to draw out the specific problems that the patient was having difficulty comprehending.

The foremost issue in this area was, again, the cause of the illness. Though patients rated their own comprehension as HIGH, 86% (18 patients) of the time the

research assistant gave a lower rating, indicating that the patients did not fully understand the cause of their illness.

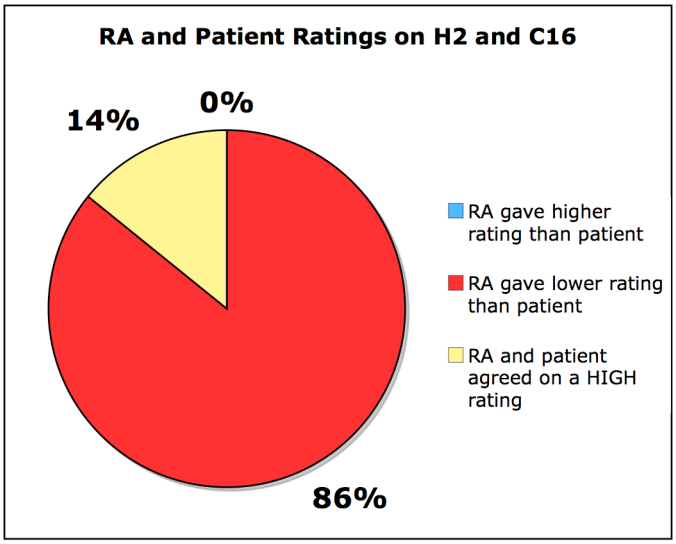


Figure 5.4 Research Assistant and Patient Ratings to questions H2 and C16: Shows the Research Assistant's Reponses to the Question "How well did the patient understand the cause of the disease" when the Patient rated themselves as having a high rating of comprehension.

Over 9% of those LOW ratings were from the bottom point of the Likert scale. These patients were judged to completely not understand the cause of their illness. 33% of the patients were give a score of 2 or "understood some."

Table 5.1 RA's Response to How Well the Patient Understood the Cause of the Disease

Response	RA: "How well does the patient understand the cause of the disease" (post-debriefing) [H2] F(%) n=21
Completely Understood (5)	1 (4.76%)
Understood Most (4)	9 (42.86%)
Understood About Half (3)	2 (9.52%)
Understood Some (2)	7 (33.33%)
Completely Didn't Understand (1)	2 (9.52%)

Once again, the patients overestimated their comprehension compared to the opinion of the research assistant. Indeed, the research assistant thought that only one patient from the study completely understood the cause of their illness. These findings reinforce the idea of the "double covert" misunderstanding in which patients believe that they fully comprehend everything that was said to them during the medical interview but their comprehension is actually rated as much lower by the research assistant demonstrating that perhaps the patients were not aware of the extent of their miscomprehension of what was said.

Comprehension of the treatment regimen was also a problem when comparing the research assistant and patient responses. The question that was asked to the research assistant was, "How well does the patient understand the treatment regimen as prescribed by the provider?" The research assistant rated the patients' comprehension of the treatment as lower than they rated themselves 52% of the time (11 patients). The patients always gave themselves a HIGH rating of either 4 or 5.

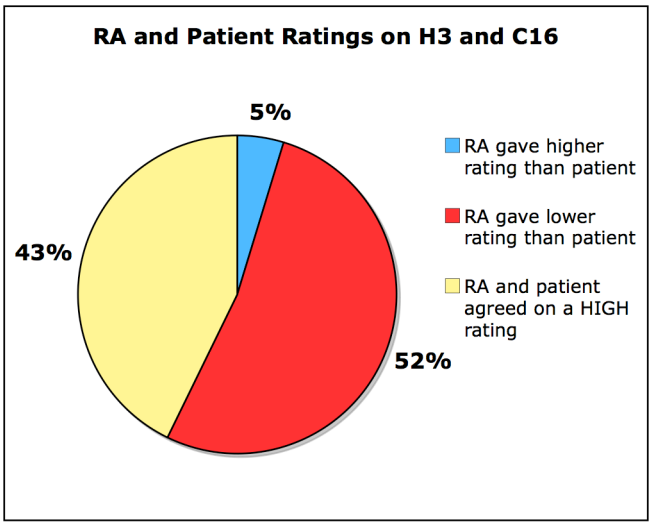


Figure 5.5 Research Assistant and Patient ratings to questions H3 and C16: Shows the Research Assistant's Reponses to the Question "How well did the patient understand the treatment prescribed" when the Patients Rated Themselves as Having a High Rate of Comprehension.

So over one half of the time, the research assistant did not find the same results as the patient. What was interesting about this compared to the provider results was that this was the patients rating themselves. Is it possible that the patients overrated their own comprehension? This evidence goes back to support the idea of a "double covert" misunderstanding. Patients stated that 100% of the time they completely understood or understood most of the interview after listening to the patients restate their treatment, the research assistant concluded that the patients did not understand as well as they thought they did, with 24% found by the research assistant to comprehend only half of their treatment regimen.

The final issue that was considered by the research assistant was how well the patients understood their diagnosis as explained by the provider. In this case, 62% of the

time the research assistant rated the patients' comprehension as lower than the patients who rated their own comprehension as HIGH (13 patients).

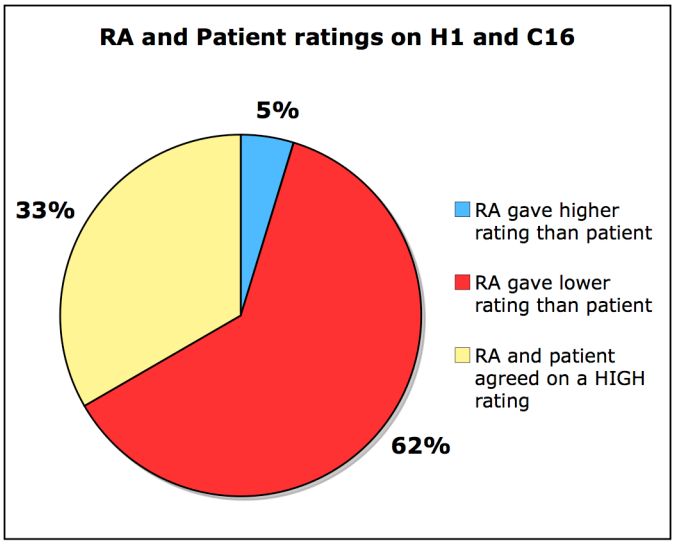


Figure 5.6 Research Assistant and Patient's Ratings to Questions H1 and C16: Shows the Research Assistant's Reponses to the Question "How well did the patient understand the diagnosis" when the Patients Gave Themselves a High Rate of Comprehension.

These data show that there were many patients who left the interview unable to restate their diagnosis. The difference here between the patient and RA ratings is greater than the difference between the provider and RA on the same question. Of all of the participants, the patients rated their own comprehension as the highest.

It would seem, based on the research assistant's conclusions, that the patients highly overestimated their own comprehension. This is particularly true when it comes to the issues of causes and treatment. This data is particularly significant, as it has been supported by the data from the health care providers as well.

5.4 Implications and Potential Discourse Repairs

This study revealed two major problems of the medical interview between non-native speaking patients and native-speaking providers. The first is that patients do not fully understand the causes of their diseases when they leave the medical interview. This can lead, not only to recurrence of the disease, but can also hinder the adherence of treatment if the patient believes that the cause of the illness is other than what was explained to them by the provider. The second problem that the data has indicated is comprehension of the treatment regimen itself. Over one fourth of the patients who left this study did not have a thorough understanding of their treatment regimen. Based on this amount of comprehension, below are some suggestions for how to deal with these issues and attempt to prevent these misunderstandings from occurring in the future.

5.4.1 Causes of the Illness

The patients' comprehension of the cause of their disease proved to be the biggest problem during the interview, based on the research assistant's assessment. Patients enter the medical interview with a potential cause for their illness already in their minds. The interview data revealed that patients perceived their illness to be caused by, for example, not covering with blankets, walking outside without a hat on, depression, or sitting in the same room with a friend who is coughing, among others. These may or may not agree with what the provider assessed as the cause of the disease. Nonetheless, the provider should take into account both their own theory about what might have caused the illness and the causes that the patients bring with them in order to

better ensure patient comprehension of the diagnosis and adherence to the treatment. A possible solution to this disconnect between providers and patients is for the provider to immediately follow-up the symptom taking and examination by asking the patients what THEY think caused the disease. Getting the patient's opinion on the cause of the disease before the provider begins the diagnosis and treatment phase of the medical interview will give the provider more insight into the best way to explain the illness to the patient and treat it properly.

For example, one female patient in the study was suffering from a urinary tract infection. The provider asked the patient numerous questions to differentiate a cause for example: "How much water do you drink," "Do you have sexual intercourse." The provider never asked the patient what she thought might have caused the illness. During the examination, the patient mentioned that she had been treated for a throat infection only a few weeks earlier and that the antibiotic had not worked effectively to eliminate the infection that eventually cleared up on its own. When the patient was asked during the debriefing what she thought the cause of her urinary tract infection might be, she answered depression. She went on to explain that she had been depressed and that depression can manifest itself physiologically in a lot of different ways. Depression had caused the urinary tract infection, she answered. Though the patient received antibiotics that would help clear up her infection, the depression was not treated nor was it addressed, as it was not brought up during the interview itself. Had the provider been aware of this patient's belief that she was suffering from depression, the treatment and advice from the provider would no doubt have integrated into the treatment for the

patient's mental symptoms as well as her physical ailments. Knowing what the patient thinks the cause of the illness is will give the provider invaluable insight as to how to better elucidate the diagnosis and treatment for each patient individually.

5.4.2 Prescribed Treatments

The second most common problem in the medical interview is patient comprehension of the treatment regimen. The research assistant rated only 75% of the patients in this study as understanding all or most of their treatment regimen.

Table 5.2 RA's Response to How Well the Patient Understood the Treatment

Response	RA: "How well does the patient understand the treatment" (post-debriefing) [H3] F(%) n=21
Completely Understood (5)	6 (28.57%)
Understood Most (4)	10 (47.62%)
Understood About Half (3)	5 (23.81%)
Understood Some (2)	0
Completely Didn't Understand (1)	0

Although it may take more time in an already rushed setting to address this issue, the findings reveal potentially serious problems with patient comprehension, much less adherence to the treatment prescribed to them. Furthermore, taking the time to review a treatment could mean that patients are more likely to adhere to it and therefore may be less likely to return for a follow-up visit of the same or similar issue. The findings of the research assistant have shed light on the need for a debriefing period for patients. Asking patients to repeat back the treatment would give the provider an idea of how well the patients understood. A more simple solution that would at least provide some assistance in this area is also writing everything down for the patient and reviewing it

with them: medicines, instructions, and so on. Many of the providers are trusting that the pharmacist will cover all of this information with the patient, but when prescription medicines are combined with over the counter treatments for symptoms, this can become confusing for the patient. A list of treatments and how they should be taken would help a great deal in addressing this problem. As cited in the literature review, 42% of patients could not understand the directions on their pill bottles and patients have been treated for accidental overdoses as the result of linguistic confusion of prescription labels (Williams et al. 1995, Boodman 2007). The results regarding comprehension and adherence to treatment are not limited to non-native speakers. One of the native English speaking patients in this study failed to recall his complete treatment regimen when asked during the debriefing, focusing mainly on the antibiotics prescribed and leaving out recommendations to treat the symptoms. In short comprehension is necessary but not sufficient for adherence to treatment. Patients must also accept the regimen as necessary for improvement of their condition.

In addition, while assessing the patient's comprehension and clarifying any misunderstandings that have occurred, providers should use as many open-ended questions as possible, allowing the patients to answer completely. Asking the patient an open-ended question requires them to provide more information than just a "yes" or "no" giving the provider a better chance to assess patient comprehension.

5.4.3 Patient Education

The final solution for addressing these problems is patient education. Patients from other cultures, in this case international students, need to be made aware of their

rights during the medical interview. Training or educational materials should be available to these students that informs them that they have the right to ask questions when speaking with the doctor. They should also vocalize their concerns when there is something that they do not understand. This will make the medical interview easier for both the providers and the patients. In the university setting, this information could be a required part of the international student orientation. For public clinics, brochures should be made available, perhaps in comic form due to health literacy concerns, that encourage patients to dialogue with their health care providers about their condition, treatment, and any beliefs that they have that could affect the diagnosis or treatment of their illness. The more educated the patients are, the more discussion the patients are able to have with the providers. The Partnership for Clear Health Communication has designed a program educating patients on how to ask questions of their provider (www.askme3.org). The campaign, titled Ask Me 3, advises patients to ask three important questions of their provider:

1. What is my main problem?
2. What do I need to do?
3. Why is it important for me to do this?

Though it may sound like this type of enablement will greatly increase the amount of time that a provider will spend with a patient, the reverse is actually true. If we can educate patients on the causes of their illness and the treatment on the first visit, adherence may increase and patients will be less likely to revisit the clinic due to a recurrence of the same illness.

5.5 Summary

A number of critical issues have been discussed in this chapter including patient comprehension of the causes of and treatments for their illness as well as the effect of the provider behavior, and the newly proposed "double covert misunderstandings." The research assistant's rating of patient debriefing revealed that patients do not fully understand the cause of their illness or the treatment regimen when they leave the provider's office. The analysis of the transcripts revealed that more indicators of misunderstandings occur during these two phases of the medical interview. The providers' linguistic behaviors: interruptions, default to technical language, and closed-ended questions, were found to hinder patient communication and comprehension. These findings were supported by the research assistant's assessments during the quantitative analysis. When the patient's comprehension ratings with the transcripts of the interview, it was immediately apparent that the patients did not understand what was said during the medical interview as well as they thought they understood. Thus a new category of misunderstandings was proposed, the "double covert" misunderstanding. Some possible solutions have been proposed to address these problems. Both awareness and cooperation on the part of the providers and patients are necessary to improve this situation. Three clear solutions have been proposed for how to deal with this issue: ask the patient the cause, ask the patient to restate the treatment, and if you are the patient, come prepared to interact with your health care provider. These solutions will address the major problems identified in this study.

CHAPTER 6

CONCLUSION

The data revealed a number of useful findings that can be applied immediately to the medical interview and that will be useful as a starting point for similar studies in the future.

This study found that while misunderstandings do occur in the intercultural medical interview, many of them are actually noticeable to the participants. These misunderstandings were labeled as "overt". The patients give triggers to signal the providers that something is unclear. A number of different triggers were examined that can occur within a discourse and the findings also opened the door for broader categories to be formed in the future. The discovery of these triggers brings awareness of their existence to the providers so that they can be properly addressed when they occur in the medical interview.

While overt misunderstandings did occur, the majority of the misunderstandings did not have triggers. In fact, even the patients are, at times, unaware of their own misunderstandings. These types of misunderstandings were labeled as "double covert." Patients consistently rated their own comprehension of the medical interview as high while unable to recall the details of their diagnosis and treatment. One explanation for this occurrence is that the patients were actually unaware that they did not fully

comprehend everything that was said. While the numbers were far greater for non-native speakers of English, even the native English speaking patients had trouble recalling the causes of their illnesses and the complete treatment regimen.

The debriefing of the patients after the medical interview proved to be a critical piece of the patient visit. This debriefing can be practically applied to the medical interview by asking the patients to restate what has been told to them. In this study, there was a 50% difference in perception of comprehension after the debriefing versus the medical interview.

6.1 Why are the findings important?

On the medical front, this study brings awareness to the specific misunderstandings that can occur in the medical interview. In addition, through the role of the research assistant in fleshing out which parts of the interview were not fully comprehended by the patients, this study is also able to offer practical applications for both the patients and the providers by revealing the parts of the medical interview that are least understood by patients. In contrast to previous linguistic studies in this field, comprehension is also quantified, providing the medical community with much needed numbers and statistics to complement the qualitative findings.

In the area of Linguistics, the findings introduce the need for a new category of misunderstandings, the "double covert" misunderstanding. In addition, although many overt and covert misunderstandings were identified, there is a need to develop additional categories for the triggers that will envelop all of the triggers that can occur in the intercultural medical interview.

6.2 What were some limitations of this study?

There were a number of limitations to this study that might have affected the outcome had things been done differently, but were unavoidable in this case. One of these is the limited range of languages spoken by the non-native English speaking patients. While there were many languages represented, most of these only had one or two participants from each language. This was an effect of the limited number of patients that could be recruited and the randomness of the study that did not allow for choosing patients based on their native language. Having many patients from each language group could provide insight into consistencies across language and cultural groups. In addition to looking at the language of the individual patient, the effect of the patient's culture on the intercultural medical interview could also be explored further.

Another possible limitation was the gender of the health care providers. All of the providers that participated in the study were women, as all of the full-time providers at the study clinic were women. It is not clear whether the gender of the health care providers would have made a difference in the findings, but the lack of male providers must be accounted for here. Using both male and female providers could eliminate gender as a potential factor in the language difficulties that occurred.

Including the registered nurses in the study might have also provided a broader picture of the entire clinic visit. It was not possible, in this case, to include the RNs due to IRB restrictions and the flow of the clinic which might be disrupted by patients being recruited and having to sign consent forms before being seen. In many cases, the patients used the time between the nurse's assessment and the provider's entrance to

read over and sign all of the consent forms. Nonetheless, the nurse's visit with the patient may have provided more information as to how the patients initially described their symptoms and gave their medical history. Perhaps in an appointment-style clinic, the RNs could also be participants in this type of study.

The recruitment of patients might have been more efficient in a clinic that used an appointment system and not a walk-on clinic. In this particular clinic, the patients' charts had their native country listed on the inside cover. If I had known in advance what patients were coming in and which ones were likely to speak a native language other than English, I would have been able to better prepare for the patients and hopefully maximize recruitment success by knowing exactly which patients might qualify. Also, the appointment system used in the same clinic today requires patients to give their reason for seeing the provider when they make the appointment. This process ensures that adequate time is given to address the patient's needs. Knowing why a patient was visiting the clinic would have allowed me the opportunity to eliminate from my list of potential patients those that could not participate, such as pregnant patients or patients being treated for mental illness.

6.3 If I knew then what I know now, what would I have done differently?

While I was very pleased with the study and the findings that it revealed, there are a few aspects of the research design that I would do differently next time. The first issue has to do with the Likert scale questions on the post-interview surveys completed by the patients and providers (Appendix C and Appendix E). The questions were designed to align the responses of the patients with those of the providers in order to

compare how often they agreed about comprehension in the medical interview. The surprise in this study was that although the patients and providers did not always agree, the research assistant's results revealed much more about the levels of comprehension. In the future, I would better align the questions asked of the providers with the questions asked of the research assistant. For example, the provider is asked the broad question "How well did the patient understand you during the medical interview?" The research assistant is asked more specific questions such as "How well did the patient understand the cause of their disease?" and "How well did the patient understand their treatment?" It would have been interesting to see how well the providers and the research assistant agreed on these more specific questions. I would also have changed the providers' post-interview survey to be all scaled questions with no open-ended questions. The providers were always in a hurry to move to the next patient and never had time to think about their answers. The answers given to the open ended questions were brief and yielded no results.

The debriefing of the patient is something that I would like to have done differently. Due to the research protocol, I was very limited in what questions I could ask the patients. In a future research design, I would leave room for more explorative questions designed to draw out the potential cultural motivations for the misunderstandings that occurred. By being free to let the patients' answers to the debriefing questions guide what was asked, I would be able to discover more about the patients' individual beliefs and how they might have affected the medical interview.

Knowing how well the patients complied with their treatment would also be helpful. Due to privacy issues, that option was not a part of the design of this study. However, it would be useful to follow up with the patients and see whether they completed their treatment regimen and how much of it they actually remembered and followed through with. Only 70% of the patients could recall most or all of their treatment within 10 minutes of the provider leaving the room. It would be interesting to assess the patients' recall after 10 hours or 10 days. Following up with the patients would not only provide insight has to how well they adhered to the prescribed treatment but could also confirm the accuracy of the research assistant's prediction as to how likely the patients were to adhere.

The research assistant was an invaluable asset to the assessment of patient and provider comprehension. She was asked to view each video of the medical interview, complete the first survey (Appendix G) and then watch the debriefing of the same patient and complete the second survey (Appendix H). It is possible that after seeing the difference in comprehension between the interview and debriefing of a few patients that she began to view the medical interview differently. Although the research assistant was shocked to hear at the conclusion of the analysis that her responses dropped by 50% between viewing the interview and the debriefing, it might have been useful to have her view all of the interviews and complete the first surveys and then view all of the interviews again followed by the debriefings and complete the second survey. This way her viewing of the debriefings would not taint her perceptions of the medical interview as a pattern of miscomprehension certainly emerged after viewing a few debriefings.

6.4 What are some directions for future research and application?

Conducting the study at a public health clinic used by the general population may give significantly different results. This study was conducted at a health clinic on a university campus. The patient population gives way to a number of limitations including diversity in both the level of education and the level of English. A public clinic would give a broader range of patients from different linguistic, socio-economic and educational backgrounds. In the future I would also seek to access many patients from each language and cultural group so as to better compare how their misunderstandings might be related to their culture or native language. Accessing these patients could be easier outside of an academic setting.

Another study that could have greater implications for patient education would be to provide the patients with specific questions to ask the providers, such as the Ask Me 3 program and test whether comprehension in the patients who use the questions is greater than that of patients who do not. In this way, a solid list of questions could be provided to non-native English speaking patients that could decrease misunderstandings in the medical interview. The same type of assessment could be done by giving specific questions and interactive tools to the health care providers and testing to see whether it enhances patient comprehension and satisfaction.

I would also expand the debriefing of the patient to explore more of the cultural motivations for their misunderstandings and look more closely at the cause and impact of these "double covert" misunderstandings. By asking more specific questions about the patients' expectations and perceptions, I may be able to get further into the minds of

the patients in order to better understand their reasons for giving high ratings of comprehension to both themselves and the providers. Moving some of the questions to the period before the provider enters would give more time and flexibility to the debriefing in order to focus on what happened during the consultation. Questions about why the patient came to the clinic and what they think caused the illness could be asked at the beginning of the visit.

When explaining the premise of this study to people, I often heard a similar question: "What about doctors who are from other countries?" The increasingly diverse population of the United States brings with it doctors either trained here or abroad whose native language is not English. Many patients expressed that they have similar challenges to those examined in this study when being seen by doctors from different language and cultural backgrounds. It would be interesting to do a study in which the health care providers come from different backgrounds from the patients to see if the same types of misunderstandings emerge. Although the providers would have a certain level of education, training, and certification, it would be interesting to compare the comprehension of patients in various settings.

If possible, this type of study could be enhanced by following up with these patients on how well they actually adhered to their prescribed treatment. One possible way to do this is to set up an anonymous online survey for patients after they leave the clinic. Though it would not be possible to connect patients with their videos, they may provide more information if submitting anonymously and this method would provide general statistics about patient adherence. Valuable information could be discovered as

to how effective these interviews are and how well the providers and the research assistant were able to judge the likelihood of adherence based on the interview and debriefing alone.

Two areas in which the results of this study and similar follow-up studies can be applied practically are in the ESL classroom and in medical training. The ESL classroom provides opportunities for students to learn not only about language, but about life in America. As students are being taught vocabulary for expressing their symptoms, they could also be taught how to prepare for the medical interview by learning how to ask questions when something is unclear and skills such as note taking for retaining valuable information such as the treatment regimen. This lesson could also include explicit instruction on medications and reading and comprehending prescriptions and medicine bottles.

A number of suggestions have been made for how health care providers can better communicate with and assess the comprehension of their patients. These tools can be used in clinics as continuing education for providers who often treat non-native English speaking patients. With even a few simple questions, the providers will be able to better evaluate how well their patients have understood what was explained to them.

6.5 Summary

Overall this study provided valuable insight into the many types of misunderstandings that occur in the intercultural medical interview. While there are things that might have been done differently, this study provides a valuable building block for similar studies in the future. The quantitative analysis was a perfect pairing for

the qualitative analysis used. The quantitative analysis provides the medical community with much needed statistics to support the linguistic findings. The qualitative analysis contributes a new understanding of the many layers of misunderstandings that can occur in intercultural medical discourse. As the population of the world continues to grow and change, studies of this nature are certain to remain a necessary part of maintaining an effective medical establishment.

APPENDIX A

HEALTH CARE PROVIDER INFORMED CONSENT FORM

THE UNIVERSITY OF TEXAS
AT ARLINGTON

INFORMED CONSENT

PRINCIPAL INVESTIGATOR: Sarah May

TITLE OF PROJECT: Intercultural Medical Discourse

You are being asked to participate in the research project indicated above. This document, entitled "Informed Consent" will explain about being a research subject in this study. It is important that you read this material carefully and then decide if you wish to be a volunteer.

PURPOSE: The purpose(s) of this research study is/are as follows:

To learn more about how patients explain their illnesses in the doctor-patient interview, especially when those patients were raised speaking a language other than English.

DURATION: Your participation in this study will take approximately 25 minutes including the time that you spend with your patient. Your consultation will be one of approximately 10 consultations to be documented during this study which is being conducted at the clinic where you treat patients.

PROCEDURES: The procedures, which will involve you as a research subject, include:

- Being observed, video and/or audio recorded while you speak with your patients.
- Completing a biographical information form to be kept confidential.
- Filling out a brief survey about each medical interview included in the study after each interview is completed.

POSSIBLE RISKS/DISCOMFORTS: There are no foreseeable risks or discomforts associated with your participation in this study.

POSSIBLE BENEFITS : As a participant in this study, you will receive no direct benefits.

The possible benefits of your participation in this study are: Enhanced communication with and understanding of your patients from diverse cultural and language backgrounds.

ALTERNATIVE PROCEDURES / TREATMENTS: If you decide not to participate in this study, you can withdraw at any time.

CONFIDENTIALITY: Every attempt will be made to see that your study results are kept confidential. A copy of the records from this study will be stored in the researcher's private office for at least three (3) years after the end of this research. The results of this study may be published and/or presented at meetings without naming you as a subject. Although your rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, the UTA IRB, and personnel particular to this research have access to the study records. Your records (informed consent and surveys) will be kept completely confidential according to current legal requirements. They will not be revealed unless required by law, or as noted above.

FINANCIAL COSTS: You will pay nothing to participate in this study.

COMPENSATION FOR PARTICIPATION: You will receive no compensation for participating in this study.

CONTACT FOR QUESTIONS: If you have any questions at any time, you may call Sarah May at (817) 459-3167 or David J. Silva, department chair, at 817-272-3133. You may call the Chairman of the Institutional Review Board at 817/272-1235 for any questions you may have about your rights as a research subject.

VOLUNTARY PARTICIPATION: **Participation in this research experiment is voluntary.** You may refuse to participate or quit at any time. If you quit or refuse to participate, the benefits to which you are otherwise entitled will not change. You may quit by calling Sarah May, whose phone number is (817) 459-3167, and whose e-mail address is sarah.fauzi@gmail.com. You will be told immediately if any of the results of the study should reasonably be expected to make you change your mind about staying in the study.

By signing below, you confirm that you have read or had this document read to you. You will be given a signed copy of this informed consent document. You have been and will continue to be given the chance to ask questions and to discuss your participation with the investigator.

You freely and voluntarily choose to be in this research project.

_____ Date: _____
Signature of Volunteer

You consent to be video and/or audio taped during the medical consultation.

_____ Date: _____
Signature of Volunteer

_____Date: _____
Signature of the Principal Investigator

APPENDIX B

HEALTH CARE PROVIDER BIOGRAPHICAL INFORMATION SURVEY

Appendix B: Provider Biographical Info

1. Year of Birth: _____
year

2. Sex: M____ F_____

3. What language did you first speak at home as a child?_____

4. What language do you speak at home now?_____

5. What language(s) do you speak:

a. at home_____

b. at work_____

c. among friends_____

d. with family_____

7. Place of Birth:_____,_____
city/town state/province country

8. Were you raised in a particular religious tradition and if so, what religion?

_____

9. Do you currently practice in a religious tradition? If so, what religion?

_____

10. Job Title:_____

11. Where did you receive your medical training?_____

12. What are some of the biggest problems that you have had in treating patients from different language backgrounds?

APPENDIX C

HEALTH CARE PROVIDER POST-VISIT SURVEY

Appendix C: Health Care Provider Post-Visit Questionnaire

1. Why did the patient make the appointment today?

2. What did you tell the patient the cause of their illness was?

3. Did the patient explain what he/she thought the cause of the illness was?

4. How well did **you** understand the patient during the visit today?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	**2**	**3**	**4**	**5**

Comments:

5. How well do you think **the patient** understood you during the visit today?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	**2**	**3**	**4**	**5**

Comments:

6. How satisfied were you with the visit today?

Very Unsatisfied	Unsatisfied	It was just OK	Satisfied	Very Satisfied
1	**2**	**3**	**4**	**5**

APPENDIX D

PATIENT INFORMED CONSENT FORM

THE UNIVERSITY OF TEXAS
AT ARLINGTON

INFORMED CONSENT

PRINCIPAL INVESTIGATOR: Sarah May

TITLE OF PROJECT: Intercultural Medical Discourse

You are being asked to participate in the research project indicated above.

This document, entitled "Informed Consent" will explain about being a research subject in this study. It is important that you read this material carefully and then decide if you wish to be a volunteer.

PURPOSE: The purpose(s) of this research study is/are as follows:

To learn more about how doctors communicate with their patients, especially when those patients were raised speaking a language other than English. This research will help doctors and patients understand each other better.

DURATION: Your participation in this study will take approximately 30 minutes. You will be one of approximately 10 people who will take part in this research, which is being conducted at the local health clinic.

PROCEDURES: The procedures, which will involve you as a research subject, include:

- Being observed, video and/or audio recorded while you speak with your doctor today
- Providing general information about yourself
- Filling out a survey about the time with your doctor when you have finished
- Answering brief questions about the time you spent with your doctor today

POSSIBLE RISKS/DISCOMFORTS: There are no foreseeable risks or discomforts associated with your participation in this study.

POSSIBLE BENEFITS : The possible benefits of your participation in this study are:
You will receive explanations before you leave for anything that you did not understand when you met with your doctor today. This research project will help identify problems that patients have when talking to their doctors and will help to inform the doctor of specific ways that he/she can improve communication with patients, if necessary.

ALTERNATIVE PROCEDURES / TREATMENTS: If you decide not to participate in this study, you may withdraw at any time. Your withdraw from the research activity will not affect the care that you would normally receive from the Student Health Clinic.

CONFIDENTIALITY: Every attempt will be made to see that your study results are kept confidential. A copy of the records from this study will be stored in the researcher's private office for at least three (3) years after the end of this research. The results of this study may be published and/or presented at meetings without naming you as a subject. Although your rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, the UTA IRB, and personnel particular to this research (Sarah May) have access to the study records. Your (informed consent and surveys) records will be kept completely confidential according to current legal requirements. They will not be revealed unless required by law, or as noted above.

FINANCIAL COSTS: You will pay nothing to participate in this study.

COMPENSATION FOR PARTICIPATION: You will receive no compensation for participating in this study.

CONTACT FOR QUESTIONS: If you have any questions, problems, you may call Sarah May at (817) 459-3167 or David J. Silva, department chair, at 817-272-3133. You may call the Chairman of the Institutional Review Board at 817/272-1235 for any questions you may have about your rights as a research subject.

VOLUNTARY PARTICIPATION: **Participation in this research experiment is voluntary.** You may refuse to participate or quit at any time. If you quit or refuse to participate, the benefits to which you are otherwise entitled will not change. You may quit by calling Sarah May, whose phone number is (817) 459-3167, and whose e-mail address is sarah.fauzi@gmail.com. You will be told immediately if any of the results of the study should reasonably be expected to make you change your mind about staying in the study.

By signing below, you confirm that you have read or had this document read to you. You will be given a signed copy of this informed consent document. You have been and will continue to be given the chance to ask questions and to discuss your participation with the investigator.

You freely and voluntarily choose to be in this research project.

_____ Date: _____
Signature of Volunteer

You consent to be video and/or audio taped during the medical consultation.

_____ Date: _____
Signature of Volunteer

_____ Date: _____
Signature of the Principal Investigator

The University of Texas at Arlington

Authorization for Use and Disclosure of
Health Information for Research Purposes

NAME OF RESEARCH
PARTICIPANT:_____

1. You agree to share your health information with Sarah May ("Researcher") and her research assistant via recording of your medical interview today for the purpose of the following research study: Intercultural Medical Discourse ("Research Project").

2. You agree to let the researchers use your health information for this research project. You also agree to let the Researcher share your health information with others who may be working with the Researcher on the project ("Recipients") including a research assistant from the School of Nursing, the faculty sponsor for the research study, Dr. Laurel Stvan, and members of the UTA Institutional Review Board and representatives of regulatory agencies for oversight and compliance activities.

3. You agree to permit the Researcher to use your health information as listed below:
    - Your biographical information (age, native language, etc..) with your name removed.
    - The recording of your medical interview in order to examine the interaction between you, the patient and your health care provider.

4. The Researcher may use your health information to create research data that does not identify you. Research data that does not identify you may be used and shared by the Researcher (for example, in a publication about the results of the Research Project).

5. Whenever possible your health information will be kept confidential as required by law. Should your health information be disclosed to anyone outside of this study, the information may no longer be protected under this Authorization. The investigator, Sarah May, and those members identified above agree to protect your health information by using and disclosing it only as permitted by you in this Authorization and as directed by federal law.

6. This authorization is voluntary. Your health care providers must continue to provide you with health care services even if you choose not to sign this authorization. However, if you choose not to sign the authorization, you cannot take part in this Research Project.

7. This Authorization does have an expiration date. This authorization shall expire on December 31, 2008.

8. If you change your mind and do not want us to collect your health information, you may cancel this authorization at any time. If you decide to cancel this authorization, you will no longer be able to take part in the Research Project. To cancel this authorization, you must make this request in writing to: Sarah May, RE: Intercultural Medical Discourse, Box 19559, The University of Texas at Arlington, Arlington, TX 76019.

9. A copy of this authorization form will be provided for you.

_____ _____

Signature of Research Participant Date

APPENDIX E

PATIENT POST-VISIT SURVEY

Appendix E: Patient Post-Visit Questionnaire

1. Year of Birth: _____
year

2. Sex: M____ F_____

3. What language did you first speak at home as a child?_____

4. What language do you speak at home now?_____

5. What language(s) do you speak:

a. at home_____

b. at work_____

c. among friends_____

d. with family_____

7. Place of
Birth:_____,_____
city/town state/province country

8. Were you raised in a particular religious tradition and if so, what religion?

_____

9. Do you currently practice in a religious tradition? If so, what religion?

_____

10. Occupation:_____

11. Reason for coming to the clinic today:_____

12. Is this your first time at this clinic?

Yes____

No_____, How many times have you been to this clinic?

_____ One Time

_____ Two Times

_____ 3-4 Times

_____ 5 Times or more

13. Is this your first time to see this doctor?

Yes_____

No_____ How many times have you seen this doctor

_____ One Time

_____ Two Times

_____ 3-4 Times

_____ 5 Times or more

14. The last time you visited this clinic (the doctor), did you follow through with the treatment prescribed?

Yes, because_____

No, because_____

15. Have you ever used an interpreter when visiting the doctor/hospital?

Yes_____

No_____

Please circle the number that **best** matches your answer to the question.

16. How well did **you** understand the doctor during your visit today?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	2	3	4	5

17. How well do you think your **doctor** understood you during your visit today?

Completely didn't understand me	Understood Some of what I said	Understood About Half of what I said	Understood Most	Completely Understood Me
1	2	3	4	5

18. How satisfied were you with your visit today?

Very Unsatisfied	Unsatisfied	It was just OK	Satisfied	Very Satisfied
1	2	3	4	5

APPENDIX F

PATIENT DEBRIEFING QUESTIONS

Appendix F: Patient Debriefing

1. Why did you come to the clinic today?
2. What caused the situation that brought you here/how did it begin?
3. What did the doctor say was the problem?
4. What did the doctor say caused the problem?
5. What did the doctor advise/say would make the problem better?
6. Do you plan on following the advice of the doctor?
7. Why or why not?

APPENDIX G

RESEARCH ASSISTANT'S SURVEY AFTER VIEWING THE MEDICAL INTERVIEW

Appendix G: Rubric of RAs comprehension of interview

After listening to the tape recorded medical interview, please circle the number that best represents your opinion of the interview.

1. How well could you understand the patient during the interview?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	**2**	**3**	**4**	**5**

Comments:

2. How well could you understand the physician during the interview?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	**2**	**3**	**4**	**5**

Comments:

3. How well do you think the patient understood the diagnosis?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	**2**	**3**	**4**	**5**

Comments:

4. How well do you think the patient understood the prescribed treatment?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	**2**	**3**	**4**	**5**

APPENDIX H

RESEARCH ASSISTANT'S SURVEY AFTER VIEWING THE MEDICAL INTERVIEW AND PATIENT DEBRIEFING

Appendix H: Rubric of Patient's Comprehension of Provider as judged by RA
After listening to the medical interview on the tape and the debriefing of the patient, please circle the number that best represents your opinion.

1. How well does the patient understand his or her disease as explained by the health care provider?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	2	3	4	5

_____ Cannot Judge

2. How well does the patient understand the cause of his/her disease?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	2	3	4	5

_____ Cannot Judge

3. How well does the patient understand the treatment regimen as prescribed by the health care provider?

Completely didn't understand	Understood Some	Understood About Half	Understood Most	Completely Understood
1	2	3	4	5

_____ Cannot Judge

4. How likely is the patient to adhere to the treatment regimen as prescribed by the health care provider?

Will not adhere	Very unlikely to adhere	Unlikely to adhere	May or may not adhere	Likely to Adhere	Very likely to adhere	Will adhere
1	2	3	4	5	6	7

APPENDIX I

HOW WELL THE PATIENT UNDERSTOOD THE PROVIDER [C16] VERSUS HOW WELL THE RESEARCH ASSISTANT RATED PATIENT COMPREHENSION OF THE CAUSE OF THE ILLNESS [H2].

✜=RA response to H2-"How well did the patient understand the cause of the disease?"					
✪=Patient Response to C16 "How well did you understand the doctor today?"					
	1	2	3	4	5
Patient 1				✜	✪
Patient 2					✜✪
Patient 3		✜			✪
Patient 5		✜		✪	
Patient 7				✜	✪
Patient 8	✜			✪	
Patient 9				✜✪	
Patient 10			✜		✪
Patient 11				✜	✪
Patient 12				✜	✪
Patient 13				✜	✪
Patient 14			✜		✪
Patient 15					✜✪
Patient 16				✜	✪
Patient 17		✜		✪	
Patient 18		✜		✪	
Patient 19		✜			✪
Patient 20		✜			✪
Patient 22	✜				✪
Patient 22b				✜✪	
Patient 23		✜		✪	

APPENDIX J

HOW WELL THE PATIENT UNDERSTOOD THE PROVIDER [C16] VERSUS HOW WELL THE RESEARCH ASSISTANT RATED PATIENT COMPREHENSION OF THE TREATMENT PRESCRIBED [H3].

✜=RA response to H3-"How well did the patient understand the treatment?"					
✪=Patient Response to C16 "How well did you understand the doctor today?"					
	1	2	3	4	5
Patient 1			✜		✪
Patient 2			✜		✪
Patient 3				✜	✪
Patient 5				✜✪	
Patient 7				✜	✪
Patient 8				✜✪	
Patient 9				✜✪	
Patient 10				✜	✪
Patient 11					✜✪
Patient 12				✜	✪
Patient 13					✜✪
Patient 14					✜✪
Patient 15					✜✪
Patient 16				✜	✪
Patient 17			✜	✪	
Patient 18			✜	✪	
Patient 19					✜✪
Patient 20			✜		✪
Patient 22				✜	✪
Patient 22b				✪	✜
Patient 23				✜✪	

APPENDIX K

HOW WELL THE PATIENT UNDERSTOOD THE PROVIDER [C16] VERSUS HOW WELL THE RESEARCH ASSISTANT RATED PATIENT COMPREHENSION OF THE DIAGNOSIS [H1].

✜=RA response to H1-"How well did the patient understand the diagnosis?"					
✪=Patient Response to C16 "How well did you understand the doctor today?"					
	1	2	3	4	5
Patient 1					✜✪
Patient 2					✜✪
Patient 3				✜	✪
Patient 5				✜✪	
Patient 7				✜	✪
Patient 8				✜✪	
Patient 9				✜✪	
Patient 10				✜	✪
Patient 11				✜	✪
Patient 12				✜	✪
Patient 13				✜	✪
Patient 14					✜✪
Patient 15					✜✪
Patient 16				✜	✪
Patient 17		✜		✪	
Patient 18			✜	✪	
Patient 19				✜	✪
Patient 20			✜		✪
Patient 22				✜	✪
Patient 22b				✜✪	
Patient 23				✜✪	

APPENDIX L

SAMPLE PATIENT INFORMATIONAL BROCHURE

Before your visit

Use this space to write down important information before you visit with the doctor.

Are you taking any medications? (including prescriptions, but also herbs, vitamins, or medicine not prescribed by a doctor)

What are the symptoms that you are experiencing?

What questions would you like to ask?

Do you have any additional concerns?

NOTES

What did your doctor say today?

Medications and Treatments (How often? For how long?)

GETTING

THE MOST

FROM YOUR VISIT

How to talk with your doctor

Be Open and Honest

Your doctor or nurse practitioner wants you to get the most out of your visit.

The best way to do this is by communicating honestly and openly with them.

Let your doctor know what your concerns are.

Do not be afraid to ask questions if you have them.

Be sure to let your doctor know if there is something that you do not understand.

Use the tips in this brochure to help you interact with your doctor.

- Be sure to tell the doctor all the symptoms that you have been experiencing.
- Tell the doctor if something is unclear or if you do not understand.
- It is important to understand your diagnosis.
- Let the doctor know if you have any concerns about the treatment prescribed, he or she will work with you to find the best possible treatment that you can use.
- Use the back of this brochure to take notes about your diagnosis and treatment.

Prescriptions
What you need to know

Your doctor and pharmacist want to be sure that you are taking the right medications and, more importantly, that you know how to take them properly. Be sure that you have the answers to the following questions before you leave the clinic:

- What is this medication for?
- How will it help me get better?
- How often should I take this medicine?
- How long should I take this medication for? Should I finish the bottle or only take it until my symptoms improve?

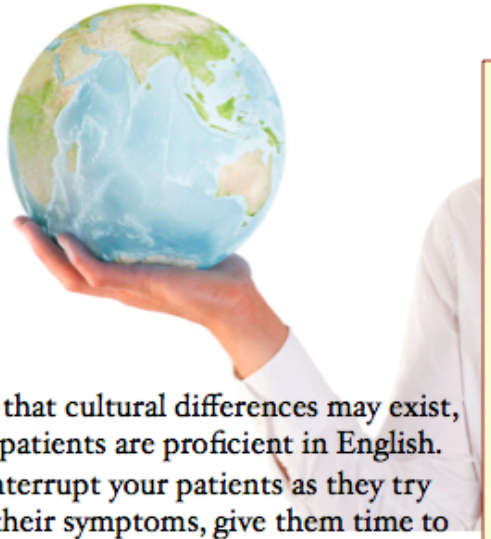
Taken from "Does Your Throat Hurt More in the Morning or Throughout the Day?" "Yes." : Intercultural Medical Discourse." by Sarah May Fauzi. 2007.

APPENDIX M

SAMPLE HEALTH CARE PROVIDER INFORMATIONAL FLYER

Communicating

With Patients from Different Cultures



- Be aware that cultural differences may exist, even if the patients are proficient in English.
- Do not interrupt your patients as they try to explain their symptoms, give them time to think and find the right words.
- Ask open-ended questions. Patients may not provide all of the necessary information when asked yes or no questions.
- After taking symptoms, ask the patients what they think caused the disease. This can give you insight into how best to explain the diagnosis.
- To ensure patient comprehension, ask the patients to restate the treatment regimen. Do not depend solely on the pharmacist to provide information about medications.

Being Aware

When entering any exam room, it is important to be aware that the patients may not share the same beliefs that you do about health, illness, and the body. These beliefs can affect the patients' perception about the cause of the disease as well as the diagnosis. Knowing more about how the patients view their illness can help you more effectively communicate the diagnosis to them.

Most importantly, be sure that the patients clearly understand any treatments that you have prescribed. Encourage them to write down the treatment regimen or provide it in writing for them. When in doubt, asking the patient to restate what you have prescribed will better ensure patient comprehension.

Taken from "Does Your Throat Hurt More in the Morning or Throughout the Day?" "Yes." : Intercultural Medical Discourse." by Sarah May Fauzi. 2007.

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BIOGRAPHICAL INFORMATION

Sarah graduated with her Bachelors Degree in Speech Communication from Arkansas State University in 2001. After teaching English at a university in East Java, Indonesia for two years, Sarah entered the graduate program in the Department of Linguistics and TESOL at The University of Texas at Arlington. Sarah earned her Graduate Certificate in TESOL and began the PhD Linguistics program in 2005. She earned her PhD in Linguistics in December 2007. Her research interests include intercultural communication and medical discourse. Sarah is also interested in the many languages in Indonesia and has been working on an Indonesian-English slang glossary throughout much of her graduate academic career. The project is expected to be completed in early 2008.