

THE LANGUAGE AND CULTURE BARRIER BETWEEN
ENGLISH-SPEAKING MEDICAL PERSONNEL AND
SPANISH-SPEAKING PATIENTS

A Senior Honors Thesis

by

BRIAN JAMES BARRAS

Submitted to the Office of Honors Programs
& Academic Scholarships
Texas A&M University
in partial fulfillment of the requirements of the

UNIVERSITY UNDERGRADUATE
RESEARCH FELLOWS

April 2004

Major: Biomedical Science

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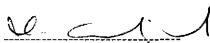
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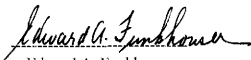
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Approved as to style and content by:



Isabel Carbajal
(Fellows Advisor)



Edward A. Funkhouser
(Executive Director)

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ABSTRACT

The Language and Culture Barrier Between
English-Speaking Medical Personnel and
Spanish-Speaking Patients. (April 2004)

Brian James Barras
Department of Biomedical Science
Texas A&M University

Fellows Advisor: Dr. Isabel Carbajal
Department of Veterinary Pathobiology

The growth of the Spanish-speaking population in Texas can cause barriers between many English-speaking medical personnel and Spanish-speaking patients. This research study will determine if a language barrier, considered in the context of two different cultures, does exist, and what are the major factors contributing to this barrier between the English-speaking medical personnel and Spanish-speaking patients at the Family Medicine Center, Bryan, Texas. In addition, the study will determine if an awareness of and response to these factors and any suggestions could diminish the language barrier. Patients at the clinic were given an anonymous, written survey at the time of check-in at the waiting room, and they were asked to return the completed survey after the doctor visit. One hundred and twenty-five patients completed surveys. Doctors and nurses also filled out written surveys. The completed surveys were returned at the clinic check-out

station. The research study found that the Spanish-speaking patients were overall less satisfied with their visit compared to English-speakers. Doctor and nurse communication and how well the doctor understood what the patient needed were also affected because of the patient's language. However, the language barrier was not significant enough to cause the patient to not receive the treatment they came to receive or to not return to the clinic for a future visit. All of the medical personnel were able to communicate well with the English-speakers, and they varied in their responses as to how they communicate with the Spanish-speakers. The lack of a diverse cultural medical personnel population that reflects the culture of the patient population is a factor contributing to the language barrier. Suggestions to diminish the barrier are to hire a more diverse medical staff, train nurses to serve as medical interpreters, and require current medical personnel to take a Spanish language class. There was not enough time in the research study to determine if a response to these suggestions would diminish the language and culture barrier.

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INTRODUCTION

Trust is the major component in medical personnel-patient interaction. In order for a patient to have trust in medical care, it is necessary for the doctors, nurses, and medical residents to communicate effectively and clearly the diagnosis and treatment required.* This communication is hindered due to the language barriers that are faced throughout the United States, especially Texas, because of the increasing numbers of non-English speakers. Language is defined as a “systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings.”¹ Culture refers to “integrated patterns of human behavior that include the language, thoughts, communications, actions, customs, beliefs, values, and institutions of racial, ethnic, religious, or social groups.”² A barrier is defined as “something immaterial that impedes or separates.”¹ Within the context of two different cultures, language can be a barrier to the quality of care provided.

In Texas, the percentage of persons of Hispanic or Latino origin is 32%. Thirty-one percent speak a language other than English at home.³ According to *Texas Challenge: Population Change and the Future of Texas*,⁴ the Hispanic population in Texas is projected to grow by 257.6% from 1990 to 2030. The minority proportion of the population will increase rapidly, and the percentage that is Anglo will decline to less than 50% by 2008 and to 36.7% of the total population in 2030. The proportion of the population that is Hispanic will increase to 45.9% by 2030.

* This thesis follows the style and format of the following: Iverson C, ed. *American Medical Association Manual of Style*. Baltimore, MD: Williams & Wilkins; 1998.

Cultural Competency

Many medical personnel, which include doctors, nurses, and residents, must face the growing number of Spanish-speaking patients. Title VI of the 1964 Civil Rights Act prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.⁵ Cultural competency could be practiced by medical personnel to facilitate this care. Competence is defined as “having the capacity to function effectively as an individual and an organization within the context of the cultural beliefs, behaviors, and needs presented by consumers and their communities.”² The American Medical Student Association defines cultural competence as “a set of academic and personal skills that allows one to increase one’s understanding and appreciation of cultural differences between groups.”⁶ Cultural competency is an essential part in fulfilling the goals of *Healthy People 2010*: increasing the quality and years of healthy life and eliminating disparities.⁷ In order to eliminate any disparities, the goals of culturally competent care should be to appreciate and accept differences encountered when seeking out knowledge about various cultures.⁶

An article entitled “Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model” examines nine of the most frequently discussed techniques in cultural competency, which are as follows:

- Interpreter services.
- Recruitment and retention of minority staff members with shared cultural beliefs and common language.
- Training programs designed to increase cultural awareness, knowledge and skills.
- Coordinating with traditional healers whom the patient is seeing to aid in continuous care.
- Use of community health minority workers to reach out to other community members.
- Culturally competent health promotion.
- Including family members and/or community members who can aid in making decisions.
- Immersing oneself into a different culture to develop skills and a deeper sensitivity. Meeting and working with people of a different culture.
- Administrative and organizational accommodations, such as location of the clinic and operating hours.

The effectiveness of culturally competent techniques has been extensively studied.

Though, health systems are unsure when and how to apply different cultural competency techniques and which ones are effective.⁸

Background Research

A research study at the Medical Primary Care Unit (MPCU) at Rhode Island Hospital verbally administered surveys to Spanish-speaking patients who spoke little or no English. Medical residents in internal medicine were provided with a written survey. One hundred and forty-nine Spanish-speaking patients and 51 medical residents participated in the study. The five methods of interpretation used at the MPCU were by: (1) family members or friends; (2) professional interpreters; (3) telephone interpreters; (4) ad hoc interpreters, such as a bilingual support staff; and (5) bilingual physicians or medical residents. The results found are as follows: “90% of medical residents (65% of patients) reported sometimes or frequently using family members or friends to interpret.

About 76% of medical residents (45% of patients) often used telephone interpreters; 75% (65%) often used professional interpreters; 23.5% (77%) often used hospital employees; and 11.8% (20.5%) often used bilingual physicians.” The use of professional interpretation received high levels of satisfaction from both residents and patients. A higher percentage of patients reported feeling somewhat or very satisfied with family members and friends and bilingual physicians than did the residents. Telephone interpreting was somewhat or very satisfying to a lower percentage of patients compared with residents. The use of hospital employees who were not professional interpreters was found to be not very satisfying to either group.⁹ Bilingual nurses who have not been trained as medical interpreters often do translate for patients with limited or no English-speaking capabilities. “Interpretation errors can frequently occur by untrained nurse-interpreters during these cross-language encounters.” Nurses that will function as interpreters should be provided with the proper avenues to seek interpretive training.¹⁰ However, the use of interpreters is not always beneficial to the care provided. Another study discovered that “patients who communicated through an interpreter or who did not have interpreter when they thought one was necessary were less satisfied with the medical personnel-patient relationship.”¹¹

The Center for Studying Health System Change conducted a Community Tracking Study Household survey of 45,000 people to examine the differences between Spanish and English speakers in the clinic setting (Table 1). The percentages of English and Spanish-speakers are listed as three categories of explanation from the doctor, thoroughness of the exam, and how the doctor listened to the patient. The responses

indicate what percentage of patients indicated the “very good” or “excellent” choices. There are higher percentages of English-speakers compared to Spanish-speakers that reported greater satisfaction with these three categories.¹²

Table 1: Patient Assessment of Physician Communication.

	% of English-Speakers	% of Spanish-Speakers
Explained	78	65
Thoroughness	75	59
Listening	77	63

Source: Community Tracking Study Household Survey, 1998-99.

Clinic Information

The Family Practice Foundation of the Brazos Valley contains both the Family Medicine Center, which is university affiliated and community based, and the Brazos Family Medicine Residency. This non-profit organization provides comprehensive primary care, regardless of one’s ability to provide full payment for the visit. The clinic serves 8,000 patients, who visit on average of three times per year. This sustains approximately 22,000 clinical encounters with patients each year. The percentage of Hispanic patients is 25 to 30%, with 10% of these patients not having functional English skills and preferring to speak Spanish.

METHODOLOGY

The method of research consists of anonymous, written surveys, the use of library materials, and the PubMed online National Library of Medicine's search service. Only patients between the ages of eighteen and eighty were given a survey (Appendix A). No patient records were used in obtaining any information. Parents filled out surveys for their children when the child had a doctor visit. Doctors and nurses were also asked to fill out a written survey (Appendix B). The patient indicated on their survey the name of their doctor, and the doctors voluntarily put their name on their surveys. No names of any doctors will be listed in this report, and all information regarding specific doctors will only be used confidentially for the Brazos Family Medicine Center's use. The research fellow filled out a Human Consent Form obtained the permission of the Institutional Review Board to survey the patients and doctors.

The method of obtaining the surveys changed throughout the course of this semester. In the beginning of the project, the research fellow sat in the waiting room with the patients and approached them asking in their native language if they would be willing to fill out a survey. A majority of people took the surveys, but forgot to fill them out after their visit. Some people simply did not feel comfortable filling out the surveys, and only a few patients actually completed and returned the surveys. This particular method proved inefficient because only 16 surveys were received over the course of two months.

In the next method, the research fellow sat with the nurses at the check-in and check-out station. The patients were asked after they checked out to fill out a survey.

The number of completed surveys increased from 16 to 33. The patients seemed to be in a more responsive mood after they had been seen by the doctor and received treatment.

The last method proved the most efficient with the clinic's implementation of the research fellow's survey as an official clinic survey. The nurses at the front desk handed out clipboards with the surveys when the patient arrived. The patients were then asked to start filling out some information in the waiting room, and then return the completed survey after the doctor visit. The number of completed surveys increased from 33 to 125.

The patients, doctors, and nurses simply circled their answers on each of the surveys. Circling the answers was very effective because it did not take that much time to complete the survey. In addition to the survey, the patient, doctors, and nurses were given an Information Sheet (Appendix C). This sheet details the purpose of the project, and it gave contact information for the clinic director, the research fellow's advisor, and the research fellow. The sheet also outlined that this was an anonymous survey, and none of the results will be used in any other way except for the purpose of this research.

Each of the surveys was coded into the SAS¹³ Release 8.02. Statistical analyses were run from this program in order to view and analyze the survey results. The study was testing the validity of null hypotheses that are variations of the form $H_0: P_E = P_S$, representing the proportions of some variable for the English and Spanish speakers respectively. The null hypothesis for this study is that there is no statistically significant difference between the English-speakers and Spanish-speakers in the satisfaction with care at the Family Medicine Clinic. Frequencies and percentages are

gross-tabulated and the chi-square test is used to test the null hypothesis. The probability must be less than 0.05 to reject the null hypothesis and thus support the inference of a statistically significant difference.

RESULTS

Patient

One hundred and twenty-five patients filled out surveys over the course of research. The number of patients who were given a survey but did not complete or return one was not recorded. Ninety-nine patients were female, and 26 patients were male. Figure 1 graphically represents the ages of the patients. Sixty-six patients were between the ages of 18 and 23, twenty-three patients between 24 and 39, and the remaining ranged from 41 to 90. The mean patient age was 32.13 years old. Eighty-two percent of the patients were from the United States, and 15% of patients were from Mexico. The remaining percentage of patients indicated that they were from a different country other than the United States or Mexico.

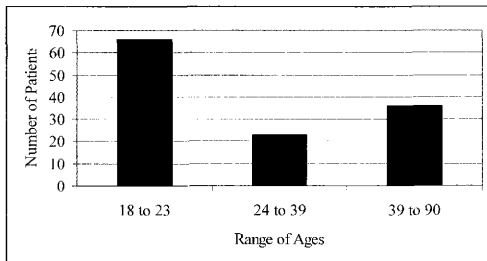


Figure 1: Patient Ages.

Figure 2 refers to how well each patient spoke the English and Spanish languages. Seventy-one percent of patients indicated that they spoke English fluently, while 35% of patients indicated they spoke Spanish fluently. Twelve patients did not speak the English language at all, 10 patients spoke the language a little, and 14 patients spoke moderately. Forty-seven patients did not speak the Spanish language at all, 21 spoke the language a little, and thirteen spoke moderately. Eighteen of the patients were bilingual, meaning that they were fluent in both the English and Spanish languages. If a patient was fluent in Spanish, they were categorized as a Spanish-speaker. Patients who were not fluent in Spanish were categorized as an English-speaker. Thus, there were 44 Spanish-speakers and 81 English-speakers in this study.

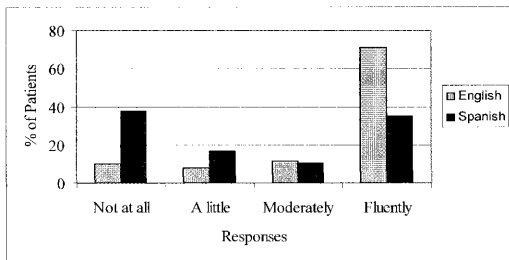


Figure 2: Proficiency of English and Spanish Language.

Table 2 refers to how well the Spanish-speaking and non-Spanish-speaking patients were able to communicate with the nurse. Thirty-six percent of the Spanish-speaking patients indicated that the nurse communicated with them “very well” compared to the 73% of the English-speaking patients. Almost 64% of Spanish-speakers indicated that the nurse communicated with them “less than very well” compared to the 27% of English-speakers. The nurse communicated poorly with 1 patient, moderately with 4 patients, and well with 41 patients. The difference is statistically significant. The null hypothesis of no difference between English and Spanish-speakers is rejected. The inference is that Spanish-speakers do not have as good communication with nurses in this setting as English-speakers.

The efficiency of doctor communication with the Spanish-speaking and English-speaking patients is represented in Table 3. Almost 78% of the English-speakers indicated that the doctor communicated with them “very well” compared to the 49% of Spanish-speakers. The doctor communicated well with 19% of the English-speakers and 44% of the Spanish-speakers. The doctor communicated moderately with 3% of the English-speakers and 7% of the Spanish-speakers. The difference is statistically significant. The null hypothesis of no difference between English and Spanish-speakers is rejected. The inference is that Spanish-speakers do not have as good communication with doctors in this setting as English-speakers.

Table 4 lists the results from the patients as to how they assessed the doctor’s understanding of all that they needed during the clinic visit. Sixty-nine percent of the English-speakers indicated that the doctor understood them “very well” compared to the

41% of Spanish-speakers. Fifty-nine percent of the Spanish-speakers circled that they felt the doctor understood them “less than very well” compared to the 31% of English-speakers. Two patients indicated a “very poor” response, 4 patients indicated a “moderate” response, and 35 patients indicated a “good” response. The difference is statistically significant. The null hypothesis of no difference between English and Spanish-speakers is rejected. The inference is the doctors did not understand well what the Spanish-speakers needed compared to the English-speakers.

Table 2: Nurse Communication.

	English-Speaker		Spanish-Speaker	
	Number	Percent	Number	Percent
Less than Very				
Good	22	27.2	28	63.6
Very Good	59	72.8	16	36.4
Total	81	100	44	100

$$X^2 = 15.81, df = 1, p < .0001$$

Table 3: Doctor Communication.

	English-Speaker		Spanish-Speaker	
	Number	Percent	Number	Percent
Moderately	2	2.6	3	7.32
Well	15	19.48	18	43.9
Very Well	60	77.92	20	48.78
Total	77	100	41	100

$$X^2 = 10.46, df = 2, p = .0053$$

Table 4: How Well the Doctor Understands the Patients.

	English-Speaker		Spanish-Speaker	
	Number	Percent	Number	Percent
Less than Very Well	25	30.86	26	59.09
Very Well	56	69.14	18	40.91
Total	81	100	44	100

$$X^2 = 9.41, df = 1, p = .0022$$

Ninety-six percent of the patients said they will come back to receive further care. Ninety-three percent of the patients agreed that they did receive the treatment that they came to the clinic to receive.

Table 5 outlines the overall satisfaction of the patients. The categories are "less than very good" and "very good." Sixty percent of English speakers said that they had a "very good" visit to the clinic that day, while only 37% of Spanish speakers indicated the same response. Forty percent of English-speakers and 63% of Spanish-speakers had a less than very good overall satisfaction. Figure 3 graphically represents the detailed overall satisfaction of the English-speakers and Spanish-speakers for all responses. Thirty-one percent of English-speakers and 40% of Spanish-speakers had a good overall satisfaction. Eight percent of English-speakers and 16% of Spanish-speakers had a regular satisfaction. No English-speakers and 2% of Spanish-speaker had a bad overall satisfaction. Finally, 1.3% of English-speakers and 4.7% of Spanish-speakers had a very bad overall satisfaction. The null hypothesis is not rejected because the probability is

greater than 0.05 and there is statistically no difference between the overall satisfaction of English-speakers and Spanish-speakers.

Table 5: Overall Satisfaction.

	English-Speaker		Spanish-Speaker	
	Number	Percent	Number	Percent
Less than Very Good	31	40.26	27	62.79
Very Good	46	59.7	16	37.2
Total	77	100	43	100

$$X^2 = 5.61, df = 1, p = 0.0179$$

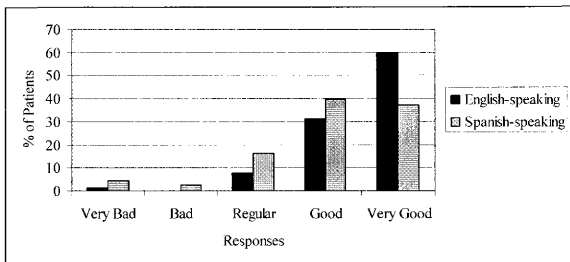


Figure 3: Detailed Response of Overall Satisfaction.

Patients were also asked if they would prefer to have an interpreter for their visit. The results are listed in Table 6. Almost 95% of English-speakers and 56% of Spanish-speakers did not prefer an interpreter. Only 5% of English-speakers and 44% of Spanish-speakers preferred to have an interpreter. The null hypothesis for this table is rejected and there is an obvious statistically significant association between the preferences of English-speakers and Spanish-speakers for an interpreter. This question was present on the English version of the survey, but this question mainly targeted the Spanish-speakers. Patients were also asked if they would trust an interpreter if they were not a family member or friend, represented in Table 7. Fifty-four percent of English-speakers and 72% of Spanish-speakers would trust a language interpreter if they were not a family member or friend. Forty-six percent of English-speakers and 28% of Spanish-speakers would not trust a non-family/friend interpreter. Fifteen patients indicated that they are interested in learning the English language, four indicated that they are not interested, and one responded that they did not know if they were interested. One patient indicated that money was a reason that they are not interested in learning the English language, and one circled the “other” response.

Table 6: Interpreter Preferences.

	English-Speakers		Spanish-Speakers	
	Number	Percent	Number	Percent
Yes	4	5.48	17	43.59
No	69	94.52	22	56.41

$$X^2 = 24.23, df = 1, p < .0001$$

Table 7: Preference for Non-Family/Friend Interpreter.

	English-Speakers		Spanish-Speakers	
	Number	Percent	Number	Percent
Yes	35	53.85	28	71.79
No	30	46.15	11	28.21

$$X^2 = 3.2882, df = 1, p = .0698$$

Medical Personnel

The responses to the doctor and nurse questionnaires, referred to collectively as medical personnel, are represented in the following findings. The questions asked were not based on any specific patient; rather they were on the overall qualities of the interaction of medical personnel with all patients. Of a total of 24 respondents, 20 doctors and nurses are from the United States, 1 is from Mexico, and 3 are from another country other than the United States or Mexico.

Figure 4 shows how well the doctors and nurses speak the English and Spanish languages. Two medical personnel speak English moderately, and the remaining medical personnel speak English fluently. Of the surveyed medical personnel in regards to proficiency in speaking Spanish, 6 cannot speak the language at all, 5 only a little, 11 can speak moderately, and only 2 can speak fluently.

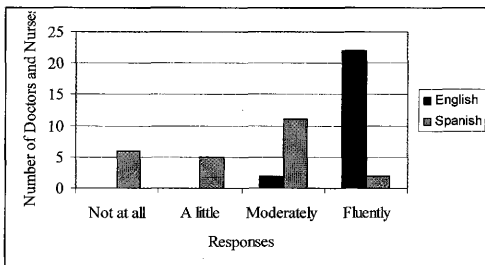


Figure 4: Doctor and Nurse Language Proficiency.

The capability of the medical personnel to communicate with the English-speaking and Spanish-speaking patients is represented in Figure 5. Only one communicates well with the English-speakers, and the remaining 23 communicate very well the Spanish-speakers. In communication with the Spanish-speakers, 7 communicate very poorly, 4 communicate poorly, 7 communicate moderately, 4 communicate well, and 2 communicated very well.

The assessment of the overall care that the medical personnel provide to the patients both English-speaking and Spanish-speaking is as follows: 1 rated providing regular care, 12 provide good care, and 11 provide very good care. Of the medical personnel on understanding what the patients need, 1 understands moderately, 20 understand well, and 3 understand very well.

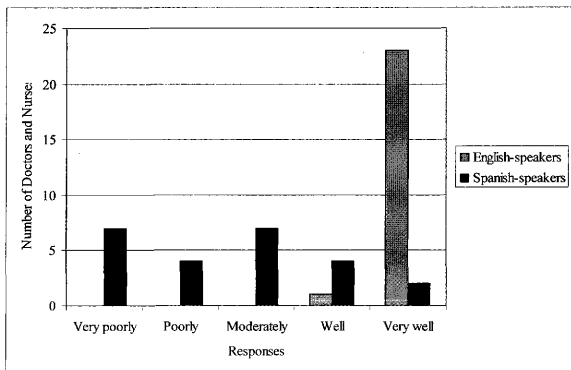
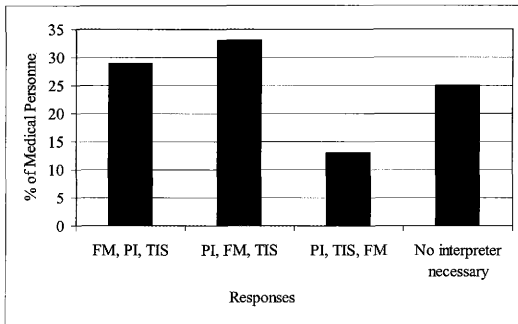


Figure 5: Communication with Patients.

All doctors and nurses that completed surveys preferred to have the nurse as the primary interpreter. Figure 6 shows the preferences of interpreters by the doctors and nurses. There were three different ranking orders of preferences after the primary nurse preference. Twenty-nine percent of medical personnel prefer patient's family member (FM), professional interpreter (PI), and then telephone interpreting service (TIS). Thirty-three percent prefer PI, FM, and then TIS. Thirteen percent prefer PI, TIS, and then FM. Twenty-five percent indicated that they did not prefer to have an interpreter of any sort when working with Spanish-speaking patients. In addition, no doctors or nurses are trained as medical interpreters.



FM = Patient's Family Member, PI = Professional Interpreter, TIS = Telephone Interpreting Service

Figure 6: Medical Personnel Interpreter Preferences.

The doctors that completed a survey were matched up with the surveyed patients that indicated they had that certain doctor. The responses to the question, "How well did your doctor communicate with you" were then tabulated for each patient of the specific surveyed doctor. The doctors are listed as numbers for purposes of confidentiality. The efficiency of how well the doctors actually communicated with the surveyed patients is represented in Table 8. Doctor 18 saw the largest numbers of surveyed patients. Doctor 18 saw nine patients, and four of these patients were Spanish-speakers. This particular doctor is fluent in English, and speaks Spanish moderately. Doctor 18 had a mean score

of 4.7, signifying that almost all the patients said the doctor communicated with them very well.

Table 8: Actual Quality of Care Doctors Provided to the Patients.

Doctor	Number of Patients Seen	Mean Score
1	2	4.5
2	2	5
3	4	5
4	2	4.5
5	0	0
6	2	5
7	2	5
8	0	0
9	3	4.33
10	4	3.75
11	1	5
12	1	5
13	1	5
14	3	5
15	4	5
16	0	0
17	0	0
18	9	4.7

Doctors 3 and 15 each saw 4 patients, and the patients said each time that the doctors communicated with them very well. Doctor 10, who also saw four patients, had patients indicate that this doctor only communicated close to well for the visits. Four doctors did not see patients that were surveyed, so their mean scores are zero. Forty-four patients indicated which doctor they saw during the visit. The data are too sparse to

support any statistical inference. On a descriptive level, however, they demonstrate variation in how patients access the care they receive from their doctors.

DISCUSSION

Patient

While a majority of patients were generally satisfied with their visit to the Family Medicine Center, differences do exist between the Spanish-speaking and English-speaking patients. Only 44 of the total surveyed patients were classified as Spanish-speakers. The original goal of the project was to survey 100 only English-speaking patients, 100 only Spanish-speaking patients, and 100 patients that are bilingual in both the Spanish and English languages. Because there were only 18 bilingual patients, the bilingual category was merged with the only Spanish-speaking category. Therefore, only two classifications of patients actually existed, English-speaker and Spanish-speaker.

It was difficult to get many Spanish-speaking patients to fill out a survey. Some of the Spanish-speakers were worried about indicating their identity, because they might not have been naturalized citizens or could not read or write in the English language. It was explained to them that this was an anonymous survey, but they still were not comfortable. Many of the English and Spanish-speaking patients simply forgot to fill out their survey when they were leaving the clinic. The patient was concerned with seeing the doctor and receiving the treatment they came to receive. Completing a survey was not their main priority in visiting the clinic. It could also be possible that some of the English-speaking and Spanish-speaking patients did not like being approached in the waiting room, or did not feel comfortable filling out a survey for the research fellow, a non-familiar face at the clinic.

Almost 80% of the patients seen in the clinic were female, which is expected because many pregnant women came to the clinic and mothers usually filled out the survey when they came for their child's appointment. According to the surveyed patient population, a majority of the respondents were between the ages of 18 and 23. It is also surprising that only 15% of the patients were from Mexico. This low number compared to the United States citizens could be attributed to the aforementioned fact that some Spanish-speakers did not feel comfortable filling out surveys. Another possibility is that the surveyed patients were born in the United States, but grew up in a Spanish-speaking household. Twenty-five of the Spanish-speaking patients were from the United States, while 18 were from Mexico. One person was not from either the United States or Mexico. This relatively small percentage of patients from Mexico attributes to the finding that a majority of the patients spoke the English language fluently, while a significantly less percentage of patients spoke the Spanish language fluently.

A statistically significant association exists between the patient's language and the responses to the nurse and doctor communication and how well the doctor understood what the patient needed. The probability for each category is less than 0.05, which means that the null hypothesis is rejected. The doctors and nurses did communicate better with the English-speakers than the Spanish-speakers, and this finding signifies that there is a language barrier that does exist between the medical personnel and the Spanish-speaking patients. The English-speakers rated the doctor's ability to understand what the patients needed higher than the Spanish-speakers rated their ability. According to this finding, language was a factor in how the patient rated

the doctor's ability to understand their needs. A statistically difference in overall satisfaction exists between the English-speakers and Spanish-speakers. A smaller percentage of Spanish-speakers compared to English-speakers indicated that they had a "very good" overall satisfaction. A greater percentage of Spanish-speakers compared to English-speakers indicated that they had a "less than very good" overall satisfaction. Only two responses existed for reporting this data because the clinic believes that anything less than very good is not sufficient. These findings show that language was a significant factor in the overall satisfaction of the patient. Nevertheless, a majority of the patients indicated that they did receive the treatment that they came to receive, and that they will come back to receive further care. This means that the language barrier did not have a great enough effect to where the patients would not return to the clinic.

A majority of the Spanish-speakers would trust interpreters if they were not a family member or friend. This is helpful for a majority of the patients who might not have a family member accompanying them and they must communicate with a nurse interpreter. It is interesting to note that a slightly higher percentage of Spanish-speakers said that they did not prefer to have an interpreter compared to having an interpreter. This difference could be due to the fact that 18 of the patients who were fluent in the Spanish language were also fluent in the English language. These bilingual patients did not feel that an interpreter was necessary because they were able to communicate with the doctor in English. Another possibility is that the doctor might have spoken some of the Spanish language and was able to communicate with the Spanish-speaking patient. Therefore, the patient would then indicate on a survey completed at the end of the visit

that an interpreter was not necessary because of the doctor's language skills. The research study did not record whether or not an interpreter was actually used for the visit.

A high percentage of both English-speakers and Spanish-speakers would trust an interpreter if they were not a family member or a friend. The question was on the English survey in order to note an interpreter preference between the Spanish-speakers and English-speakers. There is an interest that exists for some of the Spanish-speakers to learn the English language. Fifteen patients would like to learn English, and only a very small number said that they would not like to learn the English language. Only two responses were given as to why they did not want to learn. The lack of money was the reason that only one Spanish-speaker did not want to learn English. A sufficient number of responses does not exist in order to determine the major reasons why a Spanish-speaker does not learn the English language. It is a positive finding that there are Spanish-speaking patients who visit this clinic that have a desire to learn the English language.

Medical Personnel

Almost all of the medical personnel fluently speak the English language, and all of them can communicate with the English-speakers. Eighteen of the medical personnel can speak Spanish at least a little bit, meaning 75% of the personnel are able to communicate somewhat with the Spanish-speakers. Seventy-five percent of the medical personnel indicated that they speak "very poorly", "poorly", or "moderately" with the

Spanish-speakers. This is a high percentage of surveyed medical personnel that cannot communicate well or very well with the Spanish-speakers. About 83% of the medical personnel are from the United States, and, thus, would more than likely not have been required to learn the Spanish language.

The medical personnel were also asked on the questionnaire to rate the care that they provide to all patients. Of the 24 surveyed medical personnel, all respondents indicated that the care they provide is either “regular”, “good”, or “very good”. A majority of the medical personnel indicated the “well” response on understanding what the patient needs. These questions did not pertain to any specific patient and were generalizing the care they provide.

All surveyed medical personnel preferred the nurse as the primary interpreter. This finding is not surprising because the nurses are the main people available at this specific clinic in providing medical interpreting. Sixty-two percent preferred the telephone interpreting service as the last option. This specific option is not implemented in the clinic and many medical personnel would be unfamiliar with this interpreter service. Forty-six percent preferred the professional interpreter after the nurse. The preference for the family member as an interpreter varied with the medical personnel. After the nurse interpreter, a slightly greater percentage of medical personnel who actually prefer an interpreter favor the use of a professional interpreter instead of the family member. A professional interpreter can be trusted to more accurately translate the pertinent information compared to the family member or friend. The medical

personnel would, thus, have more of a preference for an interpreter than can be trusted to more accurately translate the needed information.

The results from Doctor 18 indicate that even though the doctor was not fluent in the Spanish language, he/she was able to communicate with most of them very well. This finding indicates that language was not a hindrance in communication with this particular doctor and the patients seen. There were not enough surveyed doctors that also had patients fill out a survey to make any strong conclusions regarding the doctor's language proficiency and communication with patients.

Only 42 patients indicated which doctor they saw.

The level of experience was not a factor in the overall satisfaction. The data were not statistically significant to verify that a difference in expertise, resident versus faculty, was a factor in overall satisfaction. No difference exists also in whether the residents or faculty saw more Spanish patients. There is no difference with doctor communication and how well doctor understood all that they needed with the faculty versus the residents.

The clinic does not have a culturally diverse workforce that relates to the culture of the patient population. No faculty physicians are of Hispanic origin. Only two residents are of Hispanic origin. Some of the nursing staff are bilingual, but this includes the nurses in the front office and working directly with the patients in the clinic. This lack of culturally diverse medical personnel that corresponds to the culture of the patients acts as a factor that causes the language barrier.

According to the an article entitled “Entry of United States medical school graduates into family practice residencies”, 1139, or 32%, of the 3564 first year family practice residents were from an international medical school and graduated outside a school outside of the United States. This number does include the United States citizens that leave the country to study abroad internationally.¹⁴ Nine of the eighteen residents at the Family Medicine Center are from outside of the United States. Many of these residents did not learn English as their first language. As they are struggling to master the English language, they must also communicate with the Spanish patients. This serves as a problem for both the doctor and patient. This is also a factor that causes a language barrier.

Suggestions for interventions to diminish the language barrier are to higher a more diverse medical staff and send some nurses for certification in medical interpreting. Another suggestion is to require the current medical personnel to take a Spanish language class to improve proficiency. There was not enough time in the research study to implement any of these suggestions and further, specific research will need to be conducted to determine if these suggestions would prove useful.

CONCLUSION

A language barrier in the context of two different cultures does exist at the Brazos Family Medicine Clinic, where communication with the doctors and nurses is effected by the language proficiency of the patient. The patient's language was also a factor in how well the doctor was able to understand what they needed and overall satisfaction. The English-speakers were more satisfied with their visit compared to the Spanish-speaker. However, these language differences were not great enough to cause the patients to not come back to this clinic for further care or to not receive the treatment they came to receive.

The factor contributing to the language barrier is the lack of Spanish language proficiency of the medical personnel. Suggestions to diminish this language barrier are to higher a more diverse medical staff that reflects the culture of the patient population, train nurses to be medical interpreters, and require current medical personnel to take a Spanish language class. No suggestions for improvement in culturally competent care were implemented due to lack of time. The research fellow was not able to determine if an awareness of and a response to these findings could diminish the language barrier. Further research will need to be conducted to determine the specific factors contributing to the language and culture barrier.

REFERENCES

1. Merriam-Webster's Collegiate Dictionary. 11th ed. Springfield, Mass: Merriam-Webster, Inc.; 2003.
2. Anderson LM, Scrimshaw SC, Fullilove MT, Fielding JE, Normand J, and the Task Force of Community Preventive Services. Culturally competent healthcare systems. *Am J Prev Med*. 2003;24:68-79.
3. US Census Bureau. State and County QuickFacts. Available at: <http://quickfacts.census.gov/qfd/states/48000.html>. Accessed March 20, 2004.
4. Murdock SH, Hoque MdN, Michael M, White S, Pecotte B. *The Texas Challenge: Population Change and the Future of Texas*. College Station, Texas: Texas A&M University Press; 1997.
5. Coordination and Review Section [Civil Rights Division of the Department of Justice Web site]. Overview of Title VI of the Civil Rights Act of 1964. Available at: <http://www.usdoj.gov/crt/cor/coord/titlevi.htm>. Accessed March 20, 2004.
6. American Medical Student Association. Cultural competency in medicine. Available at: <http://www.amsa.org/programs/gpit/cultural.cfm>. Accessed January 28, 2004.
7. Healthy People 2010. Available at: <http://www.healthypeople.gov/About/goals.htm>. Accessed March 21, 2004.
8. Brach C, Fraser I. Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model. *Med Care Res Rev*. 2000;57(suppl 1): 181-217.
9. Kuo D, Fagan MJ. Satisfaction with methods of Spanish interpretation in an ambulatory care clinic. *J Gen Intern Med*. 1999;14:547.
10. Elderkin-Thompson V, Silver RC, Waitzkin H. When nurses double as interpreters: a study of Spanish-speaking patients in the US primary care setting. *Soc Sci & Med*. 2001;52:1343-1358.
11. Baker DW, Hayes R, Fortier JP. Interpreter use and satisfaction with interpersonal aspects of care for Spanish-speaking patients. *Med Care*. 1998;36:1461-1470.
12. Center for Studying Health System Change. Community Tracking Study Household Survey, 1996-97 and Followback Survey, 1997-98: [United States] [Public-Use Version] [Computer file]. 4th ICPSR version. Washington, DC: Center for Studying Health System Change [producer], 2000. Inter-university Consortium for Political and Social Research [distributor], 2000.

13. SAS Institute Inc. SAS, release 8.2. Cary, NG: SAS Institute, Inc. 1999-2001.

14. McPherson DS, Schmittling GT, Pugno PA, Kahn NB. Entry of United States medical school graduates into family practice residencies: 2002-2003 and 3-year summary. *Fam Med.* 2003;35:555-63.

APPENDIX A
PATIENT SURVEY

1. Date _____
2. Doctor's name _____
3. Sex: Male Female
4. Age: _____
5. Nationality: US Mexico Other
6. How well do you speak English?
 Not at all A little Moderately Fluently
7. How well do you speak Spanish?
 Not at all A little Moderately Fluently
8. Overall, how would you assess your overall clinic visit today?
 Very bad Bad Regular Good Very good
9. Did you receive the treatment that you came in here to receive?
 Yes No I do not know
10. How well was the nurse able to communicate with you?
 Very poorly Poorly Moderately Well Very well
11. How well was the doctor able to communicate with you?
 Very poorly Poorly Moderately Well Very well
12. How well did the doctor understand all that you needed?
 Very poorly Poorly Moderate amount Well Very well
13. Will you come back to receive further care? Yes No I do not know

14. Do you prefer to have an interpreter here? Yes No I do not know

15. Would you trust a language interpreter if they were not a family member or friend?

Yes No I do not know

16. Please add any additional comments:

APPENDIX B

MEDICAL PERSONNEL SURVEY

Your name _____

1. Sex: Male Female
2. Age _____
3. Nationality: US Mexico Other _____
4. How well do you speak English?
 Not at all A little Moderate amount Fluently
5. How well do you speak Spanish?
 Not at all A little Moderate amount Fluently
6. How well are you able to communicate with English-speaking patients?
 Very poorly Poorly Moderate amount Well Very well
7. How well are you able to communicate with Spanish-speaking patients?
 Very poorly Poorly Moderate amount Well Very well
8. Are you trained as a bilingual medical interpreter?
 Yes No
9. Overall, how would you assess the care you provide to the patients?
 Very bad Bad Regular Good Very good
10. How well are you able to understand what exactly the patients need?
 Very poorly Poorly Moderate amount Well Very well
11. Do you prefer to have an interpreter when working with Spanish-speaking patients?
 Yes No I do not know

- a. If yes, please rank the following (1 being the best and 4 being the worst) in options you would like for an interpreter:

_____ Nurse

_____ Patient's family member

_____ Telephone interpreting service

_____ Professional Interpreter

- b. If no, why not?

12. Please list any other additional comments you would like to make.

APPENDIX C**INFORMED CONSENT**

You are being asked to participate in a research study to find solutions to the language and cultural barriers which exist between doctors and patients. There will be a total of 300 subjects with the following characteristics: 100 only Spanish-speaking patients, 100 Spanish and English-speaking patients, and 100 only English-speaking patients. The study is being conducted in the waiting room at the Bryan Family Medicine Clinic from the months of September 2003 through April 2004 by Brian Barras, a Research Fellow's student at Texas A&M University. All responses will be tabulated for the student's thesis and no person other than his advisor, Dr. Isabel Carbajal, will be identified in any report or other use of the data.

This is NO RISK to you for anonymously filling out the survey and/or answering verbal questions in an anonymous interview. In addition, there are no benefits to you for filling out the survey or being interviewed. Completion of the survey will take 10 minutes and will be filled out before and after you receive care. The research study does not use any of your medical records or other personal documents. The survey and interview are voluntary and it is your right to refuse to answer any questions that makes you feel uncomfortable. Additionally, if you do not wish to participate in this study, it will have no effect on the care that you receive at the Bryan Family Medicine Clinic. If child abuse is detected, it must be reported to the proper authorities.

If you have any questions concerning this research study, you may contact my advisor Dr. Isabel Carbajal or Dr. Robert Moore, the clinic director. This research study has been reviewed and approved by the Institutional Review Board – Human Subjects Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, the Institutional Review Board can be contacted through Dr. Michael W. Buckley, Director of Support Services, Office of Vice President for Research.

For any other questions, the subject can contact:
Brian Barras

Thank you for your participation in this research study.

VITA

BRIAN JAMES BARRAS

EDUCATION

Texas A&M University, College Station, TX; December 2004

Bachelor of Biomedical Science*Spanish Certificate**Undergraduate Research Fellow*

Grade Point Ratio: 3.76

Salamanca, Spain Study Abroad Program; Summer 2003

LEADERSHIP ACTIVITIES

International Youth Forum, Rome, Italy, Participant, 2004

- One of four Americans chosen by the Pontifical Council for Laity
- Represented St. Mary's Catholic Center and the United States at a conference with 300 international students from 80 countries

Academy for Future International Leaders, Member, 2003-present

- One of eighteen Texas A&M students chosen to participate
- Will participate in mentor program, work on team projects with fellow members, and have a internship in the summer

St. Mary's Catholic Center, Texas A&M University, College Station*Leadership Institute*, Conference Coordinator, 2003

- Organized and coordinated Fall Leadership Conference
- Recruited speakers and participants

Aggie Awakening, Leadership, 2001

- Coordinated and conducted meetings for 100 college students
- Organized two retreats for 300 college students each
- Administered a talk to 200 college students
- Facilitated small group discussions

WORK

B/CS Family Health Service, Dr. Daniel Quigley, Summer 2002

- Shadowed a pediatrician for a total of 50 hours
- Assessed vital signs of patients

VOLUNTEER WORK

St. Josephs Regional Health Center Emergency Room Volunteer

St. Mary's Eucharistic Minister, Lector, Choir Member

St. Thomas Aquinas Youth, Core Team, 2002