

Effect of Language Immersion on Communication with Latino Patients

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Abstract

Background: In the US, the fastest growing segment of the general pediatric population is Latino children. Language barriers may impede optimal care for these patients. Programs are needed to enhance communication effectiveness with Latino patients. We examined the effect of language immersion training for pediatric faculty on their communication with Latino patients.

Methods: Five general pediatric faculty physicians were sent to Guatemala for a two-week language immersion course and then had monthly one-hour Spanish language meetings for one year. Before and after immersion, six, and twelve months later, their Spanish skills were assessed. Before and after faculty training, Latino parents of pediatric patients were surveyed to assess their trust in and communication with the attending pediatricians. Spanish survey instruments were pilot tested and revised (trust scale $\alpha = 0.79$; communication scale $\alpha = 0.80$).

Results: Language proficiency increased for all the faculty participants, from a baseline score of 28% to a post-intervention score of 55%, $p < 0.001$. This increase in proficiency was sustained six and twelve months after the intervention. General linear modeling with repeated measures was used to examine associations between physician, parent, and clinic variables and the doctor-patient communication and patient trust scores. Even though baseline communication and trust scores were high, both improved after the intervention, $p < 0.01$.

Conclusion: A two-week faculty language-training program can improve physician's language skills, communication, and trust between non-Latino doctor and Latino patient. Other measures of cultural competence should be measured and cost-benefit analyses conducted to assess the impact of immersion versus classroom experience.

Keywords: Latino health, cultural and language barriers, pediatric care.

The Latino population has grown by more than 60% in the past 10 years, surpassing African Americans as the largest minority group in the US.¹ Like Latinos nationally, this population in North Carolina has increased at a rate that is double the rate of total population growth.² Local health directors estimate that North Carolina's Latino population is close to 2229,902.³ Communication difficulties are an important barrier to healthcare access for Latinos.⁴ Failure to consider a patient's language needs and cultural underpinnings can lead to misdiagnosis, inappropriate medication, and mistrust, resulting in poor medical care.^{5,6}

Trust is a key element of the doctor-patient relationship.⁷ It is thought to affect patients' willingness to seek care, to reveal sensitive information, and to adhere to treatment.⁸ Although the

importance of trust is widely acknowledged, almost no work has been done to devise or evaluate interventions to improve trust. Currently, communication with patients who have limited English proficiency involves the triad of patient, doctor, and interpreter. Often this arrangement has the interpreter as the focus of communication, with a resultant loss in direct interaction between patient and doctor.⁹ Spanish-speaking patients whose regular clinician does not speak Spanish are less likely to complete follow-up appointments, less likely to take medications as directed, and more likely to use an emergency department for routine care.¹⁰

We conducted an exploratory study to examine the effect of a two-week Spanish immersion experience on pediatric faculty Spanish language skills and on the way their patients perceived

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communication with and trust in their physician. We did not anticipate that physicians could attain fluency in such a short time; instead we wanted to explore the benefits of a two-week immersion experience on patient-doctor communication and trust.

Methods

The study protocol was approved by the Institutional Review Board at The Wake Forest University School of Medicine. Informed consent was reviewed by a Spanish speaking data collector for each patient.

Subjects: The study participants were pediatricians in the general pediatrics section (n=5, all of whom were non-Hispanic Caucasians) of Wake Forest University School of Medicine and the Latino patients they care for in two settings: (1) a community clinic in which 50-70% of patients have limited English proficiency and (2) a newborn nursery in which 30-50% of patients have limited English proficiency. Eligibility criteria included parent self-identified limited English proficiency (the parent stated that they understood Spanish and did not feel comfortable understanding or speaking English). All parents self-identified as limited English proficient who presented to either site on the days that any one of the participating faculty doctors were present, were invited to participate in the study. They were told that both sites were interested in improving the healthcare that Latino patients received. They were also told that if they wanted to provide their feedback after their visit was complete, they would be asked their opinions about how the clinic functioned and their experience.

Intervention: Faculty participants were sent to Guatemala for two weeks of language immersion training at the Christian Spanish Academy. This language academy is staffed by certified Spanish language teachers, all of whom are native Spanish speakers. The decision to undergo language immersion in Guatemala instead of Mexico, where most of the immigrants in this region are from, stemmed from cost and convenience considerations. A large city in Guatemala was chosen to ensure that a mainstream Spanish would be learned, versus a specific dialect.

The doctors received one-on-one tutoring for six hours/day and lived with a family who spoke only Spanish. The same Spanish tutor was used for each of the participants. She had training in medical Spanish. For five hours/day, the doctors were immersed in conversational Spanish, for one hour/day they were immersed in medical Spanish. Once the doctors returned, a monthly one-hour Spanish immersion program was established to continue their learning. Two native Spanish speakers participated in the sessions and helped guide conversations and correct language errors. This language maintenance program is ongoing.

Study Cost Per Participating Physician: Airfare to Guatemala ranged from \$600-\$800 (depending on the season).

Two-weeks of language instruction at the Christian Spanish Academy cost \$280. Room and board with a near-by Spanish family cost \$140. Including other items such as Medivac insurance, registration, and some extra spending money, the total cost per faculty participant was \$1,155. The cost of monthly luncheon sessions consisted of lunch costs for the two native Spanish speakers who participated in the sessions.

Measures: The three primary outcome measures were changes in physicians' Spanish proficiency, parents' views of patient-doctor communication, and parents' trust in the faculty physicians. Physician Spanish language proficiency was measured using the Spanish Language Institute test.¹¹ Parents' perceptions were measured using study-specific instruments based on Safran's communication scale and Hall's trust scale.^{12,13}

The communication and trust instruments were translated and back-translated by two native Spanish speakers. Next, the instruments were pilot tested with Latino patients. We asked the participants to tell us what trust in their doctors meant and altered the questions accordingly. We also learned that questions phrased in the negative, were inconsistently answered. Therefore, we re-worded the questions to be phrased in the positive. Both the underlying constructs of "communication" and "trust" were discussed with 41 Latino clinic patients to determine what these meant to them. Instruments were modified accordingly.¹⁴ The final version of the *communication* instrument had eight items such as: "How was the doctor who saw your child today at: 'taking time to talk about your concerns,' 'asking questions about your reasons for the visit,' and 'listening to your story.'" Possible scores ranged from 5-40, with higher numbers indicating better-perceived communication; the alpha coefficient was 0.79. The final version of the *trust* instrument had ten items such as: "This doctor will do everything necessary to provide my child with all the care s/he needs," "This doctor respects the way I care for my child," and "This doctor makes my child feel at ease." Possible scores ranged from 5-50, with higher numbers indicating higher trust in the physician; the trust instrument had an alpha coefficient of 0.80.

Data Collection: The faculty physicians completed a Spanish language proficiency test within one week prior to departure for the immersion program and then one week, six months, and twelve months after their return. Latino patient questionnaires (communication and trust) were collected for an average of 15 patients per participating physician one to two weeks prior to that physician's training and one to two weeks after that physician's immersion experience. It was not possible to collect data from the *same* patients who participated pre-intervention since these were not continuity-based patients but instead were walk-ins (well and sick) or newborn children (newborn assessment). During both phases, every precaution was taken to ensure that the patient's responses were confidential and that their physician would not see any survey responses.

Statistical Analysis: For each doctor we compared Spanish proficiency before and after the intervention using a t-test for

related samples. After conducting descriptive statistics on the faculty and patient participants, we generated models to examine patient-doctor communication and patient-doctor trust. Independent variables included characteristics of the physician (gender, age, years in practice), characteristics of the patient visit (patient's gender, age, well or sick visit, clinic type), and characteristics of the parent (age, education, employment, and health insurance status). General linear modeling with repeated measures was used to examine associations between these variables and the physician communication and patient trust scores. Significant predictors were entered as control variables during the main analyses described below. The generalized estimating equations-independent method (GEE-independent) was used to analyze the data to control for within-physician correlations.

Results

The five physicians' ages ranged from 36 to 57 years of age; four were female. They had practice experience ranging from eight to 25 years. Two of the five physicians had taken high school Spanish, two had taken high school French, and the remaining doctor had no past language training.

Language proficiency increased for all the physician participants from an average of 28% (scored on the language proficiency test) at baseline to 55% immediately after the immersion course, $p < 0.001$. Six months after the training, the physicians scored an average of 51% and twelve months after the initial training the

average score was 50%.

Eighty-five parents completed communication and trust rating instruments at baseline; there were also 85 parents who completed these instruments after the physician immersion training. Table 1 shows the characteristics of the pre- and post-intervention parent samples. There were no statistically significant differences between the two samples with respect to mean age of caregiver, country of origin (Mexico), relationship between caregiver and child, employment of the caregiver, and purpose of the visit. However, there were significant differences in the education of the caregiver, age of the child, clinic site, percent of children with insurance, and caregiver's perceived health status of the child at the time of visit.

Parents' rating of physician communication at baseline before training was 33 (out of a maximum score of 40); after physician training, average communication scores were 38, $p < 0.01$. Average trust scores before the intervention were 44 (out of a maximum score of 50); after the physician training, average trust scores were 47, $p < 0.01$.

After controlling for sample differences, improvements in both communication and trust scores remained statistically significant (refer to Table 2). Before the intervention, clinic visits required an interpreter to translate between physician and family. Following the intervention, interpreters were present to assist communication and understanding if needed, but the physicians directly spoke to their patients. Higher faculty Spanish proficiency on the standardized test and higher communication scores as rated by the parent were independently associated with an increased trust score, although when examined together, only the effects of

Table 1.
Patient Population Characteristics in the Study

Patient Characteristics	Pre-intervention n=85 (s.d.)	Post-intervention n=85 (s.d.)
Caregiver was mother (%)	84.8	77.3
Caregiver was employed (%)	34.8	32.2
Caregiver had at least high school education (%)*	39.1	26.7
Child had insurance (%)*	81.5	51.1
Age of caregiver	25.7(5.8)	25.0(5.4)
Age of the child*	0.4(0.6)	0.6(1.3)
Country of origin Mexico (%)	80.4	74.6
Well-child visit (%)	70.6	73.6
Clinic site vs Newborn Nursery*	86.4	57.8
Health status of child today (range 1-5)*	3.88(1.33)	4.24 (1.03)

* $p < 0.05$

Table 2.
Generalized Estimating Equations (GEE) analyses estimating the effect of the intervention on physician trust scores and communication scores in non-repeated clusters (n=170).

Independent Variables	Trust Score β (s.e.)	Communication Score β (s.e.)
Spanish language pre-post difference	1.92(0.67)**	3.50(0.78)**
Child has insurance	-0.68(0.73)	-0.76(0.87)
Physician years in practice	-0.15(0.080)	Not Included
Parent's perception of child's health status	0.78(0.32)*	2.65(0.39)**
Well child visit	2.43(0.94)**	0.17(1.09)
Constant	41.71(2.03)**	22.64(1.89)**

* $p \leq .05$

** $p \leq .01$

Age of physician not included in trust score model because of high collinearity (0.90) with years of practice of physician. Both age of physician as well as years of practice were not correlated with the communication scores in the bivariate analyses, and were therefore not included in all the communication score models.

the parent rating of higher communication score remained significantly associated with increased trust.

There were unintended positive benefits from the faculty immersion experience. Word spread quickly and generated interest. Within one year of this faculty experience, a total of 48 medical students, residents, and faculty participated in similar programs. Moreover, the Family Medicine department created a Latino health module encouraging learning through immersion and the Public Health Section at Wake Forest University Health Sciences started a regular Spanish learning conference applying the same model we used in the Department of Pediatrics.

Discussion

The Latino population is the fastest growing segment of American society; North Carolina is no different. It is essential that we determine how to best meet the needs of this patient population. In August 2000, the US Health and Human Services Office for Civil Rights issued written policy guidelines for clinicians to ensure language assistance for persons with limited English skills.¹⁵ Moreover, the Latino Consortium of the American Academy of Pediatrics Center for Child Health Research recently released important priorities for furthering the health of Latino children. They emphasized that language problems can significantly impact healthcare for Latino children and the consortium recommended that health professions schools offer Spanish language instruction.¹⁶

We conducted an exploratory study to examine the effect of a Spanish Immersion training program on physician Spanish language skills, family perceptions of doctor-patient communication and patient trust. The two-week language immersion program for faculty physicians improved all three outcomes. Previous research indicates that small changes in summary scores for perceptual scales, such as satisfaction, can have important effects on health-related behavior, such as seeking care or adhering to treatment.^{12,17}

Several challenges confront researchers in this field. For example, the Latino value of *simpatía*—maintaining interpersonal harmony—may bias responses toward the positive. Therefore, it is difficult to determine the true effect of the intervention. In our study, while baseline trust and communication were high, a further look at the data indicates that pre-intervention patients reported that doctors were more often “bueno” (good) at “allowing the family to tell their story,” while post-intervention they more often reported that the doctors were “excelente” (excellent) in this skill. This might indicate that the doctors were more culturally attuned to the importance of letting patients tell their

story, showing *respeto* (respect) to their patients.

In this study, we focused on Spanish language acquisition but we did not measure *other* aspects of culture. The increase in trust was not dependent on *how much* new language was acquired; therefore, we suspect that a different aspect of being immersed in another culture might have contributed to patient trust gains. Prior work indicates that language is a necessary but insufficient part of cultural competence.^{5,18}

This study had a small sample size, was limited to one institution in the American Southeast, and may not be generalizable to programs in other geographic areas. Moreover, four of the five physicians were female and prior literature indicates that females communicate better than their male counterparts.^{7,12,19,20} Thus, the study was biased toward understanding the effect of female physician communication with their patients. Despite this small sample size, we detected a significant effect with a short-term intervention focused on building language skills.

Implications and Recommendations

Given the rapid increase of the Latino population, to provide quality healthcare for Latino patients, healthcare professionals need to develop innovative approaches to learn culturally competent skills. Acquiring Spanish language is a necessary part of improving communication and enhancing trust. Given the findings from this pilot study and the recommendations of the Latino Health Consortium,¹⁶ it is important to begin to institute faculty development programs. Cultural values such as *simpatía* (interpersonal harmony) and *respeto* (respect) need to be addressed, both in the programs and in the evaluation of them.

Future studies would benefit from a larger sample size, consistency in pre- and post-intervention patient samples, comparisons of different teaching strategies (e.g. classroom versus immersion), and formal cost-benefit analyses. Additionally, future studies should consider evaluating cultural competency in physicians more broadly than language proficiency, examining outcomes such as healthcare use, other measures of quality of care, and patient satisfaction. Larger and longer studies are needed to evaluate the impact of enhanced physician skills and attitudes on clinical outcomes in Latino children. As we await definitive research, our experience suggests there are concrete benefits from this kind of approach.

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