



# The Effect of Language Concordance on Health Care Relationship Trust Score

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## Introduction

Patients with limited English proficiency (LEP) face various barriers accessing healthcare, including language barriers. To address language barriers, health systems either use interpreters or physicians speaking the same language as their patients may practice language concordant care. Different forms of language assistance may impact relationship formation. Studying various aspects of the patient-physician relationship can help optimize patient outcomes and improve overall care. This prospective study uses the Health Care Relationship (HCR) Trust score to determine the effect of language concordance on this factor.

## Research Question

For Spanish-speaking patients, do patients who receive health care from language concordant providers score higher on a Health Care Relationship Trust scale than patients who use either professional or ad hoc interpreters? The primary outcome in this study is the composite HCR trust score. Secondary outcomes were the scores for individual survey questions.

## Materials and Methods

This study was a prospective survey using the Health Care Relationship (HCR) Trust score. To achieve statistical significance, 128 responses were needed. Adult participants who spoke Spanish during their encounter with their physician were recruited from family and internal medicine community clinics from Nov. 2020 to May 2021. Participant surveys were analyzed in three groups based on the language format of their interaction: Group A had a language concordant physician; Group B used an ad hoc interpreter; Group C used a professional interpreter. Survey items were answered using a scale with 0 meaning "none of the time" and 4 meaning "all of the time." The Kruskal-Wallis test was used to determine statistical significance of the means of each group. Then, the Dwass, Steel, Critchlow-Flinger Method for multiple comparisons was used to compare means for the three groups for each question.

## Results

There were a total of 214 participants enrolled with 176 surveys completed fully and used in the analysis. Group A had 67 participants, Group B 17 participants, and Group C had 92 participants.

Data were analyzed for statistical significance in total HCR trust scores and individual questions. For the total HCR trust score, Group A had a mean total score of 48.73 and Group C had 48.27, representing no difference ( $p = 0.9975$ ). Overall trust for Group A was greater than Group B with a mean of 45.53 ( $p = 0.0090$ ). Trust for Group C was also higher than Group B ( $p = 0.0119$ ).

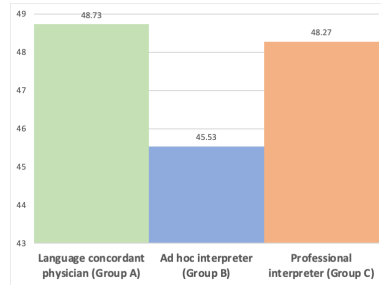


Figure 1: Mean total HCR Trust Scores by group

Mean Composite HCR Trust score Comparison	p-value
Group A vs. Group B	0.009
Group A vs. Group C	0.9975
Group B vs. Group C	0.0119

Table 1: p-values and statistical significance for paired group comparisons of total HCR Trust score mean

Questions	Group	Mean Score	Dwass, Steel, Critchlow-Flinger Method Comparisons	P-value
My doctor discusses options and choices with me before health care decisions are made.	A	3.78	A vs. B	0.0232*
	B	3.41	A vs. C	0.6879
	C	3.60	B vs. C	0.1145
My doctor is committed to providing the best care possible.	A	3.88	A vs. B	0.0371*
	B	3.65	A vs. C	0.9451
	C	3.85	B vs. C	0.0117*
My doctor tells me the complete truth about my health-related problems.	A	3.88	A vs. B	0.1804
	B	3.71	A vs. C	0.4959
	C	3.89	B vs. C	0.0149*
My doctor makes me feel that I am worthy of his/her time and effort.	A	3.91	A vs. B	0.0162*
	B	3.65	A vs. C	0.8471
	C	3.90	B vs. C	0.0018*
My doctor takes the time to listen to me during each appointment.	A	3.93	A vs. B	0.0350*
	B	3.71	A vs. C	0.9465
	C	3.87	B vs. C	0.0513
I feel comfortable talking to my doctor about my personal issues.	A	3.82	A vs. B	0.0310*
	B	3.59	A vs. C	0.4893
	C	3.87	B vs. C	0.0008*
I feel better after seeing my doctor.	A	3.88	A vs. B	0.0144*
	B	3.59	A vs. C	0.8116
	C	3.87	B vs. C	0.0016*
My doctor considers my need for privacy.	A	3.73	A vs. B	0.1692
	B	3.59	A vs. C	0.4941
	C	3.77	B vs. C	0.0140*

Table 2: Individual survey items with statistical differences in mean HCR Trust score among study groups.

Language concordant encounters had higher trust than ad hoc interpreters regarding physicians: discussing options with patients; being committed to providing the best care; making patients feel worthy of their time; taking time to listen to patient; making patient feel comfortable talking about personal issues; and feeling better after seeing the doctor.

Professional interpreter group also scored higher than the ad hoc interpreter group regarding physicians: being committed to providing the best care; telling the truth; making the patient feel worthy of their time; making the patient feel comfortable talking about personal issues; feeling better after seeing the doctor; and considering the patient's need for privacy.

## Conclusion

There was not a statistically significant difference between the HCR trust scores of language concordant physicians and those that used professional interpreters. There were, however, higher trust scores overall for both professional language groups when compared to ad hoc interpreters. It is important to meet patients' most basic need, language, to care for them. This reinforces the importance of increasing workforce diversity in medicine as well as ensuring adequate use of interpreter services for better trust formation in patient-physician relationships.

Limitations of this study include a significant proportion of surveys that were incomplete for unknown reason and could not be analyzed. Additionally, this study was conducted amidst the COVID-19 Pandemic, leading to potential confounders and various differences in trust within all sectors of healthcare that are unable to be measured here.

## Summary

- Patients with LEP require adequate language services which may include professional interpreters or language concordant providers
- Language concordance and the use of professional interpreters led to similar levels of patient trust in their physicians
- Both language concordant providers and professional interpreters led to higher patient trust in their physicians than ad hoc interpreters, both overall and in multiple specific aspects of the patient-physician relationship

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