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Language Co-Construction and Collaboration in Interpreter-Mediated Primary Care Encounters With Hispanic Adults

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Abstract

Purpose: Language asymmetry between patients and providers may influence the context, content, and quality of health care communication, affecting patient outcomes and contributing to health disparities. This research examined interpreter-mediated, primary care encounters between English-speaking nurse practitioners and Spanish-speaking adult patients.

Method: Situational analysis guided the collection, analysis, and interpretation of audio-recorded clinical encounter data.

Results: Interpreter-mediated communication was situated within intersecting social, economic, political, and health systems contexts. Three modes of collaborative knowledge generations were *Constructing Connections*, *Constructing Mutual Understanding*, and *Constructing Effective Systems Navigation Strategies*.

Discussion: These findings illustrate how interactants contributed individual and collective knowledge across multiple systems to address patient concerns.

Conclusion: The analysis revealed ways in which communication processes may influence both providers' diagnostic and interventional decision-making and patients' understanding and potential compliance. Ongoing preparation and support for intraprofessional collaboration is needed to ensure effective communication and mitigate untoward effects of language asymmetries in clinical encounters.

Keywords

language and communications; patient-provider relationships; language access; ethnicity; health inequalities; language interpretation

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Introduction

Verbal interchanges between patients and providers are an integral component of every health care encounter. These verbal interchanges involve complex intersections of the personal characteristics of both patients and providers and diverse systems-level contexts and processes. The content and quality of patient-provider communications may affect individual health outcomes and contribute to health disparities among marginalized groups (Aronson, Burgess, Phelan, & Juarez, 2012). Language asymmetry exists when patients and providers have varying degrees of proficiency in a given language, a situation that may further complicate health care interactions. Linguistic barriers, including language asymmetry, are among modifiable health care barriers associated with late presentation to care, lack of treatment, poorer health outcomes, and ultimately health disparities (Levas et al., 2014; Terui, 2017). Appropriate utilization of professional language interpreter services can mitigate health disparities associated with suboptimal patient-provider communication related to language asymmetry (Hsieh, 2016). A language interpreter is a third party whose role is to facilitate oral language communication between a patient and provider with language asymmetries, either in person or via remote access (National Council on Interpreting in Health Care, 2001).

In the United States, more than 37 million U.S. residents age 5 and older speak Spanish at home (Ryan, 2013), contributing to the growing need for health care interpretation services for Spanish speakers. The National Standards for Culturally and Linguistically Appropriate Services (CLAS) reflect official recognition of the critical relationships between language access, health care quality, and patient outcomes (U.S. Department of Health and Human Services, 2012; U.S. Department of Health and Human Services Office of Minority Health, 2001). Aimed at improving communication quality and advancing health equity, these mandated CLAS standards include the requirement to provide interpreter services, either on-site or telephonic, at no charge to the patient.

Interpreters are critical to ensuring clear communication between language-discordant patients and providers. However, the addition of another participant adds complexity to the patient-provider interaction. Prior research has examined multiple components of interpreter-mediated health care encounters, ranging from utilization of interpreter services (Chiam et al., 2017; Karliner, Pérez-Stable, & Gregorich, 2017) to interpretation accuracy (Cortabarría, 2015; Napoles, Santoyo-Olsson, Karliner, Gregorich, & Pérez-Stable, 2015); ethical conflicts (Hordyk, Macdonald, & Brassard, 2017), and patient satisfaction (Dunlap et al., 2015). The primary data sources in these studies included postencounter surveys and interviews with patients, language interpreters, and providers. There is a clear knowledge gap regarding the actual *communication processes and dynamics within interpreter-mediated health care encounters*. To address this gap, the aim of this research was to analyze the content and processes of the linguistic exchanges within clinical encounters involving Spanish-speaking adult patients with limited English proficiency, nurse practitioners (NPs), and language interpreters. In the following sections, we describe the research context and settings, participant characteristics, and research methods.

Method

Setting and Sites

The setting was the Charlotte, North Carolina metropolitan area, with a growing Hispanic population of diverse origin including Mexico, Cuba, Puerto Rico, Dominican Republic, and other Central and South American countries. In 2014, more than 128,000 residents identified as Hispanic/Latino in this area, comprising 13% of the total population, and 81% of North Carolina Hispanics spoke a language other than only English at home (Pew Research Center Hispanic Trends, 2014).

The two sites were a community-funded primary care clinic serving uninsured, low-income residents and an outpatient clinic affiliated with a for-profit health care system. At the community clinic, the NPs were employees and the language interpreters were volunteers. New patients were screened for financial eligibility and if approved could receive acute, episodic, and chronic disease care on a sliding- scale fee arrangement. Patients also received prescription assistance through a community nonprofit pharmacy program with similar qualifying requirements. At the hospital- affiliated clinic, the NPs and interpreters were employees and patient services were reimbursed through insurance, Medicaid, or self-pay. Patients had access to the same community nonprofit pharmacy program for assistance in obtaining prescription medications if they met income eligibility requirements. Both clinics had Spanish-language signage, forms, patient education materials, and signage. Interpreters also served in the dual role of informal systems navigators (McDowell, Messias, & Estrada, 2011), helping patients fill out forms, sign up for education classes, or access other health and social resources. A university institutional review board reviewed and approved the research and the administration of both clinics reviewed and approved the research protocol.

Participants

The primary researcher personally contacted NPs and interpreters at each site, invited them to participate in the study, and obtained their consent. Subsequently, each NP identified dates when Spanish-speaking patients had scheduled appointments, with the aim of purposefully recruiting a diverse sample of patients (i.e., age, gender, national origin). On the designated days, the researcher and a trained bilingual research assistant were present in the clinic waiting room. They approached Hispanic patients to invite them to participate in the research and provided oral and written information in Spanish about the research. Interested individuals provided informed consent and Health Insurance Portability and Accountability Act authorization.

Study participants included three board-certified NPs, three language interpreters, and five Spanish-speaking adult patients with limited English proficiency. The female NPs ranged in age from 41 to 52 years and were U.S.-born and educated. They reported 10 to 17 years of practice experience in their respective specialties. The three female interpreters ranged in age from 41 to 51 years and were U.S.-born. Each had extensive Spanish-language experience and formal training in health care interpretation. Sarah completed a 5-month study abroad program in Spain; Maria had lived in Puerto Rico as a child and considered Spanish her first language; Maggie had received a master's degree in Spanish translation and

had served as an interpreter on numerous group trips to Latin America. Sarah and Maggie were volunteers and Maria was a clinic employee. The Hispanic patients included four females and one male, ages 22 to 45 years. They were from Mexico ($n = 1$), El Salvador ($n = 3$), and Honduras ($n = 1$) and reported having resided in the United States between 8 and 15 years. All self-reported “minimal” or “no understanding” of written and spoken English.

Data Collection, Transcription, and Analysis

The data sources included audio-recordings of five primary care consultations involving a monolingual (English) NP, a Spanish-speaking adult patient, and a bilingual (Spanish/English) language interpreter; postencounter interviews with each individual patient; and onsite field observations. All parties gave individual prior consent to audio-record the interpreter-mediated clinic consultations, which lasted between 12 and 18 minutes. Since the researchers were not present during the clinical encounters, the NPs assumed responsibility for starting and stopping the digital recorder at the beginning and end of each consultation. Each interpreter and NP also completed a two-page postencounter written survey. Interpreters described “the role of a language interpreter in a healthcare encounter” and NPs identified “any concerns or problems related to language or communication in this interaction.”

The primary researcher, a native English speaker fluent in Spanish, transcribed the bilingual audio-recordings of the interpreter-mediated encounters in English and Spanish. Concurrently, the bilingual/bicultural research assistant, a native Spanish-speaker, independently transcribed the Spanish-language portions of the encounter recordings. Both transcriptionists then jointly reviewed and reconciled their transcriptions to assure the encounter transcriptions reflected the Spanish language portions as accurately as possible. Prior to analysis, the primary researcher compared the final transcriptions with the audio-recordings to verify completeness and accuracy. The second researcher, an experienced, bilingual qualitative researcher, provided guidance and oversight during the transcription process.

As the aim of this research was to explore both macro and micro-level processes within triadic, interpreter-mediated clinical encounters, a social ecological model guided the selection of the analytic strategy (Centers for Disease Control and Prevention, 2015). Situational analysis (SA) is research approach that addresses the complexity of social interactions by recognizing the interplay between interactants and nonhuman elements that constitute the situation under study, thus expanding the scope and complexity of the examination to the broader social and institutional contexts and interactions (Clarke, 2005). In addition to utilizing the classic analytic tools of grounded theory such as open and focused coding and theoretical memos (Strauss & Corbin, 1998), SA involves the creation of multiple analytic maps (e.g., working maps, ordered maps, relational maps). Figure 1 is the relational map that informed this analysis through representation of the historical, narrative, and visual discourses interwoven throughout the interpreter-mediated primary health care encounters under study.

The collaborative analysis involved both researchers, who first individually open-coded the each encounter transcript. Subsequent steps involved collective identification of codes and

themes within each encounter data set (i.e., interpreter-mediated encounter audio file, patient postinterview, and provider and interpreter postencounter surveys). Consistent with the principles of SA, each researcher then explored the relevant macro-level contexts as indexed by the interactants within the course of the conversations, uncovering “sites of silence” (Clarke, 2005, p. 85) that may have previously been unknown (Figure 1). Subsequently, both researchers came together to conduct the iterative process of refining the analysis through reconciliation of minor coding variations, focused-coding, and the generation and naming of the main themes. The presentation of the findings is an examination of *language in action* as it unfolded in actual interpreter-mediated primary care encounters. This includes a description of how the interactants (patient, provider, and interpreter) negotiated these verbal interchanges, reflections on what these interactions reveal about the social world of interpreter-mediated health care encounters, and the identification of implications for nursing and health care practice and research.

Results

The analysis of this set of interpreter-mediated patient-NP encounters resulted in the identification of three modes of co-constructed, collaborative knowledge generation, situated within the context of broader social, economic, political, and health systems contexts. *Constructing Connections* included establishing and maintaining relationships essential to collective knowledge generation. *Constructing Mutual Understanding* was the collective process of ensuring that communication was accurate and understood by all parties. *Constructing Effective Systems Navigation Strategies* involved individual and collective knowledge and understanding of the health care system, as providers’ efforts to respond to the broader economic and political forces affecting provision of health care in order to enhance the wellbeing and satisfaction of the patient.

Within each of these processes, the researchers identified salient constructs, ranging from how patients pay for their care and providers’ documentation requirements tied to financial reimbursement incentives to the political climate surrounding health care reform and the impact on undocumented immigrants. In the following sections, each of these collaborative processes is described in more detail with examples of supporting data; Spanish-language data excerpts include italicized English gloss. All names are pseudonyms. In the tabled excerpts, the speakers are designated as P (patient), NP (nurse practitioner), and I (interpreter).

Constructing Connections: Establishing and Maintaining Relationships

Far from impersonal, clinical interactions, these conversations revealed a familiarity and ongoing relationship between the NPs and interpreters, the interpreters and patients, and, occasionally, across the triad. Without exception, in the postencounter surveys the NPs and interpreters referenced their long-standing professional relationships and mutual respect, noting how these relationships facilitated the work of providing health care when language asymmetry exists. There was evidence across all audio-recorded encounters that the interpreters also had prior clinic encounters with the patients, continuity which may have contributed to enhanced communication.

Engaging in introductory pleasantries was a way to initiate the encounter and connect with the patient on a personal basis. Several appointments involved patients and providers who were meeting for the first time; in these instances, early in the interaction the NP used personal references, such as interacting with a baby, referencing a place they had in common, or complementing personal appearance. In the following example (Table 1), NP Benson interrupted her opening overview to compliment the patient on her appearance. She then continued to conduct a focused and interactive encounter, which in the follow-up interview, the patient reported as very satisfactory.

In contrast, in her encounter with Paola, NP Tyndall proceeded directly to the clinical issues without engaging in any type of introductory pleasantries (Table 2). During the first 7 minutes of the encounter Paola was minimally interactive. Finally, when the conversation turned to her unexpected line of work, she became more actively engaged.

After NP Tyndall responded with surprise and delight, Paola was more verbally engaged during the remainder of the encounter. Interestingly, it was not until this moment that Paola revealed her limited proficiency in English.

Constructing Mutual Understanding: Ensuring Accuracy as a Collective Responsibility

Ensuring linguistic accuracy was a focus of all interactants, not just the interpreters. Providers, patients, and interpreters actively collaborated in a variety of ways to find the best word or phrase to communicate the intended meaning. The interpreters actively pursued the goal of providing accurate interpretations. In the following exchange, when NP Benson was examining Miguel, a 52-year-old male with hematuria, she suggested he use “plain normal saline” for irrigation of his nasal cavity. The interaction reflects how Maggie was searching for the correct term in Spanish:

Puede comprar se llama salin . . . que si como se llama en español . . . Sabe es la misma cosa. Salin, salin . . . salin. (You can buy something called salin . . . oh, how do you call it in Spanish . . . you know, it’s the same thing. Salin, salin, salino)

In responding to the postencounter survey, Maggie reflected on her need “to look up the words gel and saline. I always carry my dictionary with me in the encounter.” Other postencounter responses revealed how the interpreters considered professional, accurate interpretation of conversational content to be of utmost importance.

Although the English-speaking NPs and Spanish-speaking patients generally communicated within their respective native languages, they occasionally moved from their designated primary language space to the collective multilingual space, where they participated more actively in negotiating meaning. In the postencounter survey, NP Tyndall described the longstanding relationship she had with Maria, the interpreter: “We’ve worked together for thirteen years. I understand Spanish, so sometimes she doesn’t interpret some things to save time because I understand.”

Another example of role fluidity in negotiating meaning was the encounter between NP Benson and Miguel regarding whether or not he could take ibuprofen for pain, due to a potential drug interaction with his current medication regimen. Maggie briefly pondered the

most appropriate way to interpret the term “blood thinner.” In this process, she rustled papers and engaged in self-talk: “Sorry, I’m gonna look up one word. . . . I’m forgettin’ the word for thin . . . Mas liquid [more liquid].” Attuned to the context of his medical situation and aware of potential side effects of the medication, the patient picked up on the provider’s use of the word *thin*, which enabled him to provide an appropriate Spanish term, *ralo*. When the interpreter settled on the term *mas liquido* [more liquid] and acknowledged the interpretation was *not quite it*, the patient confirmed his understanding of the potential danger with the confirmation, *mmhmm. Liquida si* [mmhmm. Liquid yes]. As this example illustrates, the process of ensuring language accuracy was not limited to the purview of the interpreters; other interactants also actively negotiated the clinical encounter communication processes and worked together to ensure accurate, mutually understood meaning.

There were several other instances in which the NPs demonstrated at least a minimal grasp of Spanish. In the following example (Table 3), NP Benson spoke directly to the patient in Spanish, bypassing the interpreter. When she reverted to English, the interpreter reentered the conversation.

In this instance, the NP was able to move fluidly between languages with the support of the interpreter. In these coconstructed interactions, participants were able to employ respective knowledge of the others’ language to actively participate in the conversation, thereby establishing personal connectivity and contributing to enhanced mutual understanding.

Constructing Effective Systems Navigation: Responding to Barriers and Challenges

A significant portion of each of the five encounters focused on issues related to prescription medications: determining what to prescribe, taking into consideration how the patient could best obtain the medications, and how the patient would pay for the medications. At one setting, the protocol was for patients to utilize the clinic-associated nonprofit pharmacy; the NPs would send the patient prescriptions electronically, and in some circumstances the medications were mailed directly to the patient’s home. Negotiating the process of prescribing medications, a usual and expected component of clinical encounters, was one example of how the NPs, interpreters, and patients collaboratively dealt with systems challenges patients faced because of their limited English proficiency, immigration status, and/or economic constraints. One interpreter noted on the postencounter survey, “The health of our patient relies on the education and understanding they receive on their Medicaid services.”

Reflecting clinic protocol, almost as an aside at the end of her consultation with Miguel, NP Benson briefly commented that the medications she had prescribed would be mailed to his home address. As NP Benson was beginning to say her goodbyes, Miguel redirected the conversation back to the issue of receiving the prescriptions by mail. He stated his preference for buying them directly from a local big box pharmacy, rather than receiving them through the nonprofit pharmacy. In an encounter with Damaris, a 45-year-old female diagnosed with a thyroid disorder, NP Benson devoted approximately a third of the visit determining how the patient would pay for the prescribed medication. Damaris disclosed she was waiting for her tax refund in order to afford the prescription. In the course of the interpreted discussion, the provider realized the patient was overpaying for the medicine and

then directed the patient to a more affordable alternative and provided a list of pharmacies with a generic, \$4 option rather than the \$20 she was currently paying. In both these encounters, the NPs tailored their responses to the patients' stated preferences and needs, rather than following the clinic protocol for electronic-prescriptions.

In the case of Dominga, a 53-year-old female with allergy issues, the prescribing issues emerged seemingly out of nowhere, interrupting the flow of the interaction. Dominga and the interpreter Sarah were discussing in Spanish the issue of how long she had been taking different allergy prescription medications, information that Sarah subsequently relayed to NP Jackson. As the encounter progressed, Dominga recounted eye and nose symptoms. Abruptly, NP Jackson interrupted with a seemingly unrelated statement: "And before, you didn't qualify for Medassist." The reason for the rapid transition became apparent after an extended interchange—she was contemplating starting a new allergy medication and was preemptively considering the possible cost of the medication for the patient. Each of these encounters provided evidence of the interactants' ability to *collectively and collaboratively* negotiate the logistical, systems, and linguistic challenges with the aim of ensuring each patient's ability to obtain the prescribed treatment.

Discussion

An essential component of patient-provider encounters, verbal exchanges contribute to participants' perceptions of the quality of the health care interactions and to patients' understanding, decision making, and subsequent actions, ultimately influencing individual health outcomes and population health disparities. This research expands the science of health care communication processes, specifically interpreter-mediated communication, in several ways. Previous studies include self-reports and interviews in which interactants reported what they do within interpreter-mediated health care encounters (Messias, McDowell, & Estrada, 2009). In contrast, these findings revealed not only the expected issues surrounding language and interpretation in interpreter-mediated interactions but also how the process actually occurred, and how the interactants performed within the encounter. This research further supports the notion of interpreter-mediated communication as a complex, collaborative, and coconstructed process (Li, 2013).

As these findings illustrated, social niceties within health care encounters may go beyond a *get-to-know-you* device and be employed to avoid essentialist perceptions that may potentially contribute to vulnerability and health disparities (Scammel & Thomas, 2013). During interpreter-mediated interactions, providers may pass over these conventions in an effort to enhance efficiency; however, the average length of visits examined in this research was similar to the average reported length of monolingual primary care clinic visits in the United States (Bruen, Ku, Lu, & Shinn, 2013). These findings underscore the importance of establishing a personal connection at the beginning of each multilingual clinical interaction. With no loss of productivity, a brief, simple interchange such as a compliment can establish a personal connection, improve patient-provider collaboration, and enhance patient satisfaction (Hart, 2017). Despite the recognized limitation of a small select sample of primary care encounters, the analysis and findings provide evidence that when the NPs acknowledge patients as individuals (e.g., as a mother to a beautiful baby or as a female

construction worker), patients became more engaged, mutual understanding was enhanced, and patients reported being very satisfied with the visit.

These findings highlight ways in which collaboratively negotiated understanding of language and cultural differences is not only possible, but may potentially empower patients and providers dealing with language asymmetries within encounters. Misunderstandings related to language can be conceptualized as a collective problem by those engaged in the conversation (Bolden, 2012), allowing space for each to apply their respective linguistic and cultural expertise in resolving the issue, not just the speaker. Thus, rather than being labeled as *limited-English-proficient*, a common and widely accepted term that focuses on language deficiency, patients fluent in languages other than English are legitimate, *differently abled* actors in multilingual interactions. The challenge for health care providers is to recognize the potential enhancement of language interaction through a co-constructed, collaborative, interpretation process and encourage patient participation, but not to overestimate the ability of either party (patient or provider), to use the other's language (Parsons, Baker, Smith-Gorvie, & Hudak, 2014). Similarly, administrators, providers, and patient advocates need to understand not only the roles and responsibilities of professional language interpreters but the risks of ad hoc interpreters (e.g., housecleaning staff, patient's family members) or providers who are not fully bilingual.

These findings also reflect the influence of larger social and structural contexts on the content and process of individual interpreter-mediated health care encounters. Decisions made in broader political, social, and economic arenas may disproportionately affect vulnerable population patients, including the poor, uninsured, and undocumented. Most undocumented patients are ineligible for public forms of insurance and are much less likely to have access to regular health care (Hacker, Anies, Folb, & Zallman, 2015). As a result of macro-level issues, many patients with limited English proficiency must rely on "safety-net" clinics, commercial pharmacies, and emergency rooms for episodic, acute, and chronic care. The impact of these broader systemic issues was evidenced in the decisions and actions of the NPs as they provided care for their patients. They needed to be thinking one step ahead about possible barriers that their patients might encounter, implicitly recognizing that a failure to consider these barriers could ultimately affect the patients' outcome.

Finally, even well-intended interventions to improve health outcomes may have unexpected or unintended consequences and may be more likely to affect those who already have barriers to health care access. For example, these findings suggest a potential negative impact of electronic prescription on medication access for certain vulnerable groups. As health care providers increasingly adopt electronic documentation and prescribing, they should be aware that some patients may have issues, beyond finances, that affect their ability to access their medications in this manner (i.e., transient housing situations), address these possible concerns before the end of the visit, and have the ability to be flexible in their intervention/treatment planning.

Conclusions

The participants in this small, focused study included both paid and volunteer language interpreters in clinics providing services to uninsured, Hispanics with limited English proficiency. There is clearly a need for more extensive research on interpreter-mediated health care encounters, health care decision making, and health outcomes among linguistically diverse patient populations (Truong, Paradies, & Priest, 2014). Further examination is needed to tease out the multiple intersections of health literacy and language asymmetries and the mechanisms through which these may contribute to health disparities, in other contexts and settings. Concurrently, students and practitioners in nursing, pharmacy, medicine, dentistry, and other health care professions need in-depth preparation in order to communicate with and care for patients with limited English proficiency. Intraprofessional research, collaboration, and practice is an essential component of ongoing efforts toward attaining universal access to care and health equity.

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Figure 1.
Situational analysis relational map.

Table 1.**Establishing Relationships Through Introductory Pleasantries.**

NP:Ok. So, you, you've had your um your blood test last week.
I:Entonces hicieron la prueba de la sangre la semana pasada.
<i>Then they tested the blood last week.</i>
P:mmhmmm, mmhmm
NP:That's a beautiful skirt.
I:Ah, tu falda es muy bonita
<i>Ah, your skirt is very pretty</i>
P:Oh, gracias
<i>Oh, thanks</i>
I:Thank you
NP:When we first checked your blood, in, February
I:Principio, cuando hicieron la primera, ah, prueba de sangre en Febrero ...
<i>At the beginning, when they did the first, ah, blood test in February ...</i>

Table 2.**Constructing Relationships Through Engagement.**

NP: Working where is she working
I: ¿En donde trabaja?
Where do you work?
P: En una construcción.
In construction
I: Construction
NP: Ok, (*softly*) construction what does she do
I: ¿Que tipo de construccion hace?
What type of construction do you do?
P: Finishing
I: Finishing
P: Drywall
NP: Oh, drywall? Wow!
(all laughing)
NP: That's impressive!
(laughter, crosstalk)

Table 3.

Employing Linguistic Knowledge to Enhance Connectivity.

I:Every day, her, her ear hurts her left

P:mmhmm

NP:Ok. Abre la boca. Saca la lengua.

Ok. Open your mouth. Stick out your tongue.

NP:Ok.

P:Me duele.

It hurts.

I:Yeah, on the right.

NP:Respira profunda. Otra vez (sound of breathing). Otra vez (sound of breathing) Una mas (sound of breathing).

Breathe deeply. Once again (sound of breathing). Once again (sound of breathing). One more (sound of breathing).

Ok, you can breathe normal.

I:Puede respirar, normalmente.

You can breathe normally.