Through interpreters' eyes: Comparing roles of professional and family interpreters

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Abstract

Objective: We describe and compare the perceptions of professional and family member interpreters concerning their roles and tasks as interpreters in primary care clinical encounters.

Methods: Encounters between physicians (19) and patients (24) accompanied by a professional (6) or a family (9) interpreter were videotaped. Stimulated recall was used to elicit interpreters' perceptions of their role in the clinical encounter. We analyzed transcriptions of the interpreter interviews using Atlas-ti software.

Results: The roles professional interpreters identified were: information transfer; creating a safe environment for the patient; mediation between cultures; maintaining professional boundaries. Family interpreters perceived their roles (facilitating understanding; ensuring diagnosis and treatment; interacting with the health care system) as part of their responsibilities as a family member.

Conclusion: Professional interpreters act mainly to ensure information transfer. Family interpreters act mainly as a third participant often speaking as themselves rather than rendering the words of doctor and patient into the other's language.

Practice implications: To obtain the maximum benefit from a professional interpreter the physician must invite the interpreter to act as an advocate for the patient and a culture broker. Physicians should always use a professional interpreter to ensure accurate information transfer. A family member should often be included in encounters to serve as a valuable patient advocate.

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1. Introduction

Due to recent waves of immigration to Western countries such as Canada, a language barrier is frequently present in encounters between patients and physicians. In Montreal, where the present study took place, approximately 30% of the population first learned and still speak a language other than the official languages (French and English) [1].

Although health care providers often rely on ad hoc interpreters, including family members, healthcare or other staff, and strangers in the waiting room [2], working with professional interpreters is recommended by official bodies [1,3] and recent research [4]. Guidelines advise professional interpreters to serve as a conduit (neutral and invisible) allowing for other roles (e.g. cultural broker) only if necessary [5].

In practice, however, professional interpreters are not neutral and actively participate as 'co-constructors' of the interaction [6,7]. Meyer describes two ways interpreters participate in the medical encounter: (1) as communication support for the primary interlocutors (reproducing speech actions in the target language and organizing turn-taking) and (2) as primary interlocutor (answering questions addressed to others, explaining cultural differences and commenting on what the other interlocutors have said) [8]. Leanza proposes four interpreter role categories: *system agent,* where the interpreter transmits the dominant discourse, norms and values to the patient and cultural difference tends to be elided or assimilated; *community agent* (the converse of system agent) where the minority (migrant) norms and values are presented to the professional; *integration agent*, where the interpreter helps migrants and healthcare providers negotiate meanings and find an ''in-

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between'' way of behaving; and *linguistic agent*, where the interpreter attempts to maintain an impartial position, intervening only on the level of language [9, pp. 186–187]. This last role is similar to that of a "conduit".

Several US studies demonstrate that professional interpreters take on and support the goals of the healthcare provider [10–12]. Greenhalgh explains, however, how their roles are restricted by institutional constraints regarding ethics and role description, as well as the space they are provided in which to work [13]. Additionally, the conduit model of interpreting does not take into account interpreters' needs: professional interpreters in the US, Switzerland, and Sweden described a tension between their role as a conduit and feeling the need to act as advocate of the patient and family, which had negative consequences for patients [14–16]. Indeed, in two UK studies, clients expressed preference for interpreters who showed care and could act on their behalf. These same studies showed that clients had a preference for family member interpreters because they were able to provide support and because of a greater feeling of trust towards them [13,17].

We undertook a study of clinical encounters in primary care between physicians and patients accompanied by either a professional or a family interpreter to delineate differences in the two types of encounters. In another paper we report on the physicians' perspectives on interpreters' roles/tasks [18]. Here we examine the perceptions of professional and family interpreters concerning their experiences and their perceptions of their roles/tasks as interpreters.

2. Methods

The research involved two phases: (1) an exploratory phase, including a focus group with professional interpreters and two interviews with lay interpreters; (2) video-recording of clinical encounters between physicians and patients with interpreters followed by semi-structured interviews with each participant while watching the video-taped encounter. The exploratory phase elicited the interpreters' concerns regarding their roles not identified in the literature, and complements the results of the main study. We interviewed the lay interpreters individually because interpreting for family members is a more sensitive activity than interpreting for strangers. We were concerned that lay interpreters would be less forthcoming in a group.

2.1. Subjects

For the first phase we recruited 4 professional interpreters and two individuals who regularly interpreted for family members. For the second phase, we conducted our research in primary care medical clinics in two districts of Montreal with a high concentration of recent immigrants. We studied 22 encounters involving 22 patients, 15 interpreters (6 professionals and 9 family members) and 19 physicians. Two professional interpreters participated in both phases. We approached all 17 physicians at the main practice who saw patients with an interpreter during the recruitment period. One physician refused to participate. We recruited 1 volunteer

physician at each of 3 other practices. Participating physicians reviewed their appointment lists with the research associate to identify patients who came with interpreters. All five patient-interpreter pairs introduced to the project by their physicians accepted. The research associate approached 17 interpreters. Two refused to participate (one professional and one family member). All 17 patients approached about the study by an interpreter they knew consented to participate.

There were 9 encounters with a family interpreter and 15 with a professional interpreter. As indicated in Table 1, interpreters 1 and 2 participated in 3 and 6 encounters, respectively. They were interviewed separately about each encounter. The languages spoken are listed in Table 1 and are representative of the limited language proficiency individuals in these practices. Professional interpreters were not employees of the healthcare institutions where the research took place, but were provided by the Interpreter Bank of the *Agence de la santé et des services sociaux,* a governmental agency, and had undergone 45 h of training and passed formal competence testing. Family member interpreters were usually more highly educated than their relatives, and had often been away from their native land for a longer period of time, two factors that contributed to their ability to assist their relative in the healthcare system.

2.2. Data

2.2.1. Phase 1

The exploratory focus group and interviews were structured around the following questions: (1) describe your work; (2) what are the challenges you face; (3) what makes you uncomfortable in your role as interpreter; (4) what can the physician/patient do to make your job easier/harder.

2.2.2. Phase 2

We videotaped one clinical encounter for each patient with either a professional or family interpreter. Each interpreter viewed the videotape with the interviewer, commenting on his/

Table 1
Interpreter characteristics

	Type	Relation to patient	Language	Sex	Age	Case(s)
1	Professional		Punjabi Urdu	F		4, 6, 10
2	Professional		Punjabi Urdu	F		1, 3, 5, 7, 8, 9
3	Professional		Vietnamese	F		11
4	Professional		Punjabi	F		12
5	Professional		Farsi	M		13
6	Family	Son-in-law	Bengali	M	40–50	2
7	Family	Daughter	Vietnamese	F	40–50	14
8	Family	Granddaughter	Farsi	F	18–25	15
9	Family	Husband	Tamil	M	30–40	16
10	Family	Daughter	Tamil	F	30–40	17
11	Family	Brother	Bengali	M	40–50	18
12	Family	Son	Dari	M	40–50	19
13	Family	Son	Tchouluba	M	30–40	20
14	Family	Husband	Greek	M	>60	21
15	Family	Husband	Pashtu	M	40–50	22

her thoughts and feelings during the interaction, and discussing his/her roles in the interaction, a method known as "stimulated recall interview" used in various research and education settings [19–23] and previously used by one of the authors [9].

2.3. Data analysis

We conducted a thematic analysis of interpreter comments on their roles in clinical encounters using a constructivist approach and Atlas-ti [24,25–27]. The three authors, bringing their separate domains of expertise, reviewed the transcripts and identified categories that emerged from the data. ER is an experienced family physician teacher of communication skills, YL is a research psychologist specialized in intercultural communication and RS is an anthropologist with expertise in migration and urban diversity. ER has extensive clinical experience with immigrants. We used a multidisciplinary inductive approach to create the categories. We came to a consensus on a list of categories through discussion within the research team. Major themes across categories were identified through extensive discussions within the group. We systematically looked for evidence of conflicting data before including any strategies in the final analysis. All 3 analysts concurred on the final themes reported below as well as the content coded within each theme.

3. Results

3.1. Professional interpreters

3.1.1. Information transfer

Most of the professional interpreters saw their principal function as ensuring information transfer, according to professional standards of a "conduit" model.

> Me, I am just their voices. I transmit the message from the patient to the doctor and from the doctor to the patient. (Case 12)

3.1.1.1. Control information flow.
Professional interpreters controlled information flow, including stopping the patient's conversation in order to translate and to ensure that all was transmitted both ways.

> Sometimes I tell to the doctor, yes I'll explain it to you later on, or to the patient, that I'll explain, let me finish this what you said. (Case 5)

Yet, at times, interpreters found it difficult to stop the patient, and felt that doing so could be detrimental to the patient's well being.

> It's very difficult to say to the patient not to interrupt us, to let us finish, because it doesn't serve the purpose, because the patient is very anxious. (Case 5)

3.1.1.2. Keep the interview on track.
Interpreters worked to maintain interview coherence and continuity. One interpreter

remarked reminding the physician of something she had proposed earlier on in the interview.

> So I just said, you said during your consultation that you would prescribe her more sleeping pills. So just I reminded her, if she wants to represcribe her or not, that's up to her. (Case 5)

Some felt that they should intervene in the interview process in order to clarify what was said.

> That's where I have to stop her [the patient], because she was talking about different things, different issues, and I had to stop her. (Case 4)

3.1.2. Create a safe environment for the patient
Interpreters worked to ensure patient comfort and trust.

> It's important for the patient to feel at ease, and comfortable. I want too that the patient doesn't feel intimidated. [...] I want the patient to say things that are important for the patient to say so that the doctor can make the right diagnosis or can help the patient. (Case 6)

3.1.2.1. Ensure confidentiality.
Interpreters felt it necessary to explain their professional role to the patient, and stress its precedence over their social role as community member.

> I say: 'you are not the first patient that I'm seeing. You can feel very comfortable to express what you want to say. We will always respect you. We are not allowed to say to anyone else.' [...] Before, they are not sure because we meet in our community. (Focus group)

3.1.2.2. Ensure respect.
Gender and age carry with them social rules of which the interpreters are aware as members of the same cultural community as the patient, and which could have an impact on what is said in the interview.

> For us, an older person must be shown a lot of respect and there are certain things that we may not feel we can say because we are young, we are women. And certain things may be more difficult but if the patient is comfortable with us, we can also feel comfortable. (Focus group)

3.1.3. Mediate between cultures
Interpreters' decisions about whether and how to act as a culture mediator are affected by the reactions they anticipate from the clinicians.

> Some want us to say what the patient has said and get out of there. (Focus group)

> If the doctor allows me to talk about culture, I explain. If she doesn't, I don't enlarge. I always respect the person I work with. (Case 12)

3.1.3.1. Clarify references and meanings. Interpreters reported stopping the interview if they felt the patient's answers to a professional's questions did not yield the desired information, to suggest changing the way questions are posed.

A mother is asked about colour preference of child. The mother comes from a poor country where preference does not come into play. The mother feels interview is useless and the [professional] feels the mother is not a good mother because she does not know her child. (Focus group)

They also reported clarifying patient statements that they thought physicians would not grasp:

The patient said "may your tongue be lucky" like what he [MD] said, may it happen that way. I told him later that that was an expression in our culture. (Case 12)

3.1.3.2. Adjust communicative patterns. Interpreters expressed adjusting patterns of communication to correspond to patient expectations:

Here, things are only said once but back home we are used to professionals repeating things more than once. Sometimes I do repeat things, because this is the way in the culture. (Case 1)

3.1.3.3. Explain social norms. Gender may also be important in the interaction, making it necessary to provide explanation to the professional.

Pakistani women find it hard to accept a male physician. I told him [the physician] he was not to feel bad because it is the culture. (Case 12)

3.1.3.4. Explain the medical system. Providing patients with information that would facilitate their understanding of the medical interview and their negotiation of the medical system was essential for some.

Here it's very fast, everything, and the professionals don't have the time. Here the people understand the way it is said... But for newly arriving people it's very, very difficult to understand. I feel that I need to [repeat] because the aim is to make the patient understand what is going on or what is to be done. (Case 1)

3.1.4. Define roles/maintain boundaries

Most professional interpreters experienced challenges to defining their role and maintaining its boundaries. This was characterized for some by a tension between a professional role, as defined by ethical considerations, health care provider expectations, institutional constraints and lack of recognition, and their desire to act in favour of patients. Some felt a responsibility to facilitate the entry into Canadian society of people with whom they share a language and often a country of origin.

Usually we say that we are cultural brokers for both sides. Sometimes we do not have this opportunity due to time constraints from both health professionals and interpreters. (Focus group)

3.1.4.1. Others disagreed.

These other duties are beyond what I feel is interpretation and what is expected of us is not mentioned. Is it just the translation or all of these things? We are not paid for this; nobody appreciates it. (Focus group)

The lack of a space for interpreters, who waited with patients in the waiting room, added to the confusion regarding the interpreters' role for both patients and interpreters.

We are waiting in the waiting room. The patients are from our culture, from our community and we feel like we are trapped. (Focus group)

3.1.4.2. Maintain boundaries. For several interpreters it was important to delineate professional boundaries by making clear to patients their role as translator, rather than as advocate.

I tell them clearly, "it's better, when the doctor will come back to remind me of what you wanted me to translate. So, I'll translate it to the doctor." (Case 8)

Many patients requested services that went beyond the professional role, creating tensions for interpreters who also felt they had a role to play as a community member as well.

The patient asked me about getting more money from Welfare. I didn't answer. I went out and I asked the doctor. We can't give that kind of help. We are just interpreters. (Case 12)

People have this tendency to talk to us because we come from the same country. Now he's talking to me about doctors in India, what his kids do in India, his past. We are sometimes in difficult situations. I listen to him and only say "yes, yes". It's not my job to intervene in personal life. (Case 8)

3.2. Family interpreters

3.2.1. Facilitate understanding

Most family interpreters felt their role was to facilitate understanding rather than to render exactly what was said.

I'm just here to make it easier for the doctor to understand what my wife said. (Case 21)

3.2.1.1. Ensure patient inclusion. Some family interpreters waited for their relatives, who had limited use of the language of communication, to speak for themselves, only translating when they sensed the need to help.

I want to wait to see if she understands. If she makes a mistake I'm going to tell her "this is the question that the doctor is asking you". (Case 16)

She speaks a little bit so I don't interrupt. [. . .] If I'm giving all the information, she's not given the chance to talk with the doctor. (Case 18)

3.2.1.2. Ensure patient comprehension. Family interpreters, reticent to interrupt the physician, translated outside the encounter.

When you stay a long time with the doctor maybe the doctor will become fed up. So sometimes we go outside; some things we have to discuss outside. (Case 22)

3.2.2. Ensure diagnosis and treatment

Several reported speaking with the patient prior to and after the appointment to elicit and clarify their relative's complaints, or observing them because they lived together.

We are always together and when she is in trouble I see myself what she is doing, how she is doing, and we can feel each other more better. (Case 22)

One reported that, with experience, he learned what kind of information doctors wanted about given complaints and made sure to elicit this information.

There's an expression in Armenian, which translated literally means, "my liver is burning". It could mean anything. It could mean upset stomach, heartburn. I can't tell the doctor "my uncle says his liver is burning". I would ask my uncle: "What do you mean by that? Let me make sure that I tell the doctor the right thing." (Family Interpreter 2)

Family interpreters were acutely aware of the high stakes for their relatives' health. One reported a bad outcome when she had had little experience interpreting.

The doctor gave her some medication. So it says "one tablet a day". And I didn't tell her. And you know, she was taking one morning, one evening, one at night. In a week's time, she had lost all her hair and her mouth inside was all blistered. After that, I look on the bottle and I write it down in their language. (Family interpreter 1)

3.2.2.1. Negotiate treatment. Many negotiated the treatment directly with the physician, speaking for their relative.

She told us to go to S [hospital]. I said "S has eye doctor but, no use to go there because it is only for cataracts." (Case 21)

3.2.2.2. Ensure recovery. Family members discussed the ways in which they provided support, both psychological and caring, to the patient for his or her recovery:

But the Asian people, like the soft heart. If you feel like "oh I have the big sick". They think and think and they get the

most sick. So that's why I tell [my wife]: "You can take the tablets and three days you will get the normal." (Case 16)

He tell to me the instructions and I explain that I'm not only going to explain to her. I'm going to take care of her. (Case 17)

One woman reported intervening with the pharmacist.

When the doctor changed it from 2.5 to 5 she didn't understand, and because they changed the packaging she said, "I am getting worse because of the medication." I went back to the pharmacist. I said, "My mother is not comfortable. So, why don't you give me the same packaging." She changed the medication for me. It was the same packaging. And then when she started taking two tablets [in] the same packaging she was fine. (Family interpreter 1)

3.2.3. Interact with health care system

Several family members recounted being responsible for issues related to organization of care, interacting on behalf of their relative with the health care system to be sure they receive appropriate care.

That's why I keep the papers, to make sure I make the phone call or something to get some information. (Case 18)

3.2.4. Fulfill family role

Family member interpreters often described accompanying their relative as an extension of their social role as family members, fulfilling obligations or expectations.

I'm the elder brother. As I don't have father or mother she now lives with me. There's no choice. Everything I have to manage it. [In Bangladesh] as a girl if she's even going to the market, she never goes alone. (Case 18)

Even if she speaks a little bit of English she scolds me "you come with me". We go like a family. (Case 16)

Living together provided knowledge about the person that was not available to a professional interpreter, providing for greater trust.

I think she feels easier with me than with someone else. We are always together and when she is in trouble I see myself what she is doing, how she is doing. [Others] will be better to translate than me but the feeling cannot be like me. (Case 22)

However, there can be some disagreements between physicians and family interpreters regarding the role of the family in the care of the patient and especially, in the delivery of bad news.

The doctor told them that it is terminal. My husband strongly believed that we shouldn't tell him. Culturally or emotionally, we thought it was a very cruel thing that he had done to my father-in-law. When you know it is coming, I think the family should handle it more than the doctor going and tell them. (Family interpreter 1)

4. Discussion and conclusion

4.1. Discussion

All interpreters expressed ways in which they were "visible" in the medical interview, as active participants [6]. However, the "visibility" of professionals differed from that of relatives, in the roles they reported fulfilling and the ways in which the roles were carried out. Professional interpreters, following Meyer's dichotomy [8], interact in ways that are mainly supportive, becoming primary only in the instances where they feel they must exert control over the process. Family interpreters carried out more primary interactions. They acted mainly as a third interlocutor in the interaction translating only when necessary, providing information and negotiating directly with the physician.

Our data show two trends that others have also found. The first is the limitation of the conduit model [9,14,28–31]. Acting as a linguistic conduit is an essential role of the interpreter. However, it does not provide interpreters with guidance in emotional situations. If they are to only serve as a conduit they are not permitted to show empathy for the patient. Many professional interpreters experienced a contradiction between their social identity, as a community member, and their professional identity as an interpreter and a part of the health care system [13].

The second trend is the absence of a place for interpreters in the institution [15,29,32]. Professionals commented on evidence of lack of respect for their capacities or status. The interpreters in this research phrased it as a spatial, very material, absence: they had no space of their own to wait, place their belongings, make calls or receive mail, as they were relegated to the waiting room with patients. We see it as a symptom: interpreters do not have their own place in the institution. They are not part of the healthcare or the administrative staff. They are only paid for translating. Other tasks such as helping patients make appointments are not remunerated, implying that these activities are not valued by health care authorities. In brief, their place in the institution was that of a tool, not a collaborator. The result of these two trends is that, in interpreters' eyes, their ability to act as integration and community agents depends on physician or institutional will and not on patient interest so that in practice, they act mainly as a linguistic or a system agent.

Family interpreters did not describe the tension between roles reported by professionals as they did not perceive themselves as system agents at all. While they were aware of physician expectations, in terms of time constraints and the kinds of information needed, they were mainly concerned with their relative's well-being. Interpreting is just one of many family roles family interpreters carry out. Family interpreters not only mediate the doctor-patient interaction; they also must navigate the medical system with their relative. As a consequence, and contrary to professional interpreters, family members seem oriented toward more community and integration roles [33].

Family interpreters represent a distinct sub-group of "ad hoc" or lay interpreters. They have privileged access to patient health information. As such they can be invaluable healthcare partners and they are less likely to commit the translation errors made by untrained hospital volunteers [34,35].

4.2. Conclusion

Professional interpreters do not operate merely as conduits: rather they are active participants in the medical interview, helping to construct meaning and to create an environment in which communication can happen. Often family members act on the behalf of the patients, in order to facilitate their diagnosis, treatment and recovery as an extension of their role as a close family member.

4.3. Practice implications

To obtain the maximum benefit from a professional interpreter the physician must invite the interpreter to act as an advocate for the patient and a culture broker. The scientific literature emphasizes the importance of working with a professional interpreter, mainly for accuracy of the translation [4], and physicians should use professional interpreters with all patients with whom they do not share a language. In addition, we consider the collaboration with (and not the "use" of) a family member as an important element in the care of chronically ill and/or elderly migrant patients. The patient who is accompanied by a family member may have the benefit of an advocate who can continue physician-to-patient information transfer after the encounter and ensure patient care. However, because the family member is also an independent interlocutor, physicians must have and use skills for triadic interaction [36]. Practitioners should be trained to work with interpreters and members of patients' support network in order to offer healthcare in the best interest of the patient.

References

[1] Swerissen H, Belfrage J, Weeks A, Jordan L, Walker C, Furler J, McAvoy B, Carter M, Peterson C. A randomised control trial of a self-management program for people with a chronic illness from Vietnamese, Chinese, Italian and Greek backgrounds. Patient Educ Couns 2006;64:360–8.

[2] Hsieh E. Understanding medical interpreters: reconceptualizing bilingual health communication. Health Commun 2006;20:177–86.

[3] Kuo D, Fagan MJ. Satisfaction with methods of Spanish interpretation in an ambulatory care clinic. J Gen Intern Med 1999;14:547–50.

[4] Karliner LS, Jacobs E, Chen AH, Mutha S. Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. Health Serv Res 2007;42:727–54.

[5] Beltran Avery M-P. The role of the health care interpreter: an evolving dialogue. Chicago: The National Council on Interpreting in Health Care Working Paper Series; 2001. p. 15.

[6] Angelelli C. Medical interpreting and cross-cultural communication. Cambridge: Cambridge University Press; 2004. p. 153.

[7] Wadensjö. Interpreting as interaction. Language in social life series. London & New York: Longman; 1998.

[8] Meyer B. Interpreter-mediated doctor–patient communication: the performance of non-trained community interpreters. In: Critical link 2: second international conference on interpreting in legal, health and social service settings; 1998.

[9] Leanza Y. Roles of community interpreters in pediatrics as seen by interpreters, physicians and researchers. Interpreting 2005;7:167–92.

[10] Bolden GB. Toward understanding practices of medical interpreting: interpreters' involvement in history taking. Discourse Stud 2000;2:387–419.

[11] Davidson B. The interpreter as institutional gatekeeper: the social-linguistic role of interpreters in Spanish–English medical discourse. J Sociolinguist 2000;4:379–405.

[12] Hsieh E. Interpreters as co-diagnosticians: overlapping roles and services between providers and interpreters. Soc Sci Med 2007;64:924–37.

[13] Greenhalgh T, Robb N, Scambler G. Communicative and strategic action in interpreted consultations in primary health care: a Habermasian perspective. Soc Sci Med 2006;63:1170–87.

[14] Norris WM, Wenrich MD, Nielsen EL, Treece PD, Jackson JC, Randall CJ. Communication about end-of-life care between language-discordant patients and clinicians: insights from medical interpreters. J Palliat Med 2005;8:1016–24.

[15] Fatahi N, Mattsson B, Hasanpoor J, Skott C. Interpreters' experiences of general practitioner–patient encounters. Scand J Prim Health Care 2005;23:159–63.

[16] Singy P, Guex P. The interpreter's role with immigrant patients: contrasted points of view. Commun Med 2005;2:45–51.

[17] Edwards R, Temple B, Alexander C. Users' experiences of interpreters: the critical role of trust. Interpreting 2005;7:77–95.

[18] Rosenberg E, Leanza Y, Seller R. Doctor–patient communication in primary care with an interpreter: physician perceptions of professional and family interpreters. Patient Educ Couns 2007;67:286–92.

[19] Neufeld VR, et al. Clinical problem-solving by medical students: a cross-sectional and longitudinal analysis. Med Educ 1981;15:315–22.

[20] Arborelius E, Timpka T. In what way may videotapes be used to get significant information about the patient physician relationship. Med Teach 1990;12:197–208.

[21] Clôt Y. La fonction psychologique du travail. Coll. Le travail humain. Paris: PUF; 1999.

[22] Stillman PL, Wang Y, Ouyang Q, Zhang S, Yang Y, Sawyer WD. Teaching and assessing clinical skills: a competency-based programme in China. Med Educ 1997;31:33–40.

[23] Timpka T, Arborelius E. A method for study of dilemmas during health care consultations. Med Inform 1991;16:55–64.

[24] Legewie H. Atlas-ti 5.0. Berlin: Scientific Software Development GmbH; 2006 [Multi-media qualitative data analysis software].

[25] Miles MH. AM qualitative data analysis: an expanded sourcebook. Thousand Oaks: Sage Publications; 1994.

[26] Lincoln YS, Guba EG. Naturalistic inquiry. Beverly Hills, CA: Sage Publications; 1985.

[27] Joffe HYL. Content and thematic analysis. In: Marks DY, L, editors. Research methods for health and clinical psychology. London: Sage; 2004. p. 56–68.

[28] Dysart-Gale D. Communication models, professionalization, and the work of medical interpreters. Health Commun 2005;17:91–103.

[29] Gerrish K, Chau R, Sobowale A, Birks E. Bridging the language barrier: the use of interpreters in primary care nursing. Health Soc Care Comm 2004;12:407–13.

[30] Hsieh E. Conflicts in how interpreters manage their roles in provider–patient interactions. Soc Sci Med 2006;62:721–30.

[31] Kaufert JM, Koolage WW. Role conflict among 'culture brokers': the experience of native Canadian medical interpreters. Soc Sci Med 1984;18:283–6.

[32] Goguikian Ratcliff B, Suardi F. L'interprète dans une consultation thérapeutique: conceptions de son rôle et difficultés éprouvées. Psychothérapies 2006;26:37–49.

[33] Green J, Free C, Bhavnani V, Newman T. Translators and mediators: bilingual young people's accounts of their interpreting work in health care. Soc Sci Med 2005;60:2097–110.

[34] Flores GMBL, Mayo SJ, Zuckerman B, Abreu M, Medina L, Hardt EJ. Errors in medical interpretation and their potential clinical consequences in pediatric encounters. Pediatrics 2003;111:6–14.

[35] Cohen ALFR, Marcuse EK, McPhillips H, Davis R. Are language barriers associated with serious medical events in hospitalized pediatric patients? 2005;116:575–9.

[36] Richard CL. M-T ed. La communication professionnelle en santé. Montréal, QC: ÉRPI; 2005.