

## **The Impact of Linguistic Concordance and the Active Offer of French Language Services on Patient Satisfaction**

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### **Abstract**

Communication is essential to providing quality primary care. Linguistic concordance between patients and physicians has been linked to improved health outcomes and greater patient satisfaction. Although Canadian Francophones often struggle to access linguistics concordant health services, the concept of the active offer of French Language Services (FLS) has emerged as a means of ensuring the availability of such services and improving the Francophone patient experience. However, the impact of language concordance and the active offer of FLS on patient satisfaction among Ontario Francophones remain largely unknown. Patient satisfaction surveys were collected as part of a continuing education program targeted at family physicians in Northeastern Ontario. Participating physicians distributed patient surveys consisting of select patient satisfaction questions from the Physicians Achievement Review (PAR) and select questions from the Active Offer of French Language Services in Minority Context Measure. Completed surveys were received from 235 patients. Just under half of these (44%) identified as Francophone, 62.6% had a French-speaking family physician; however, only 17.2% reported regularly speaking in French with their family physician. As hypothesized, there was a consistent

tendency for Francophones who experience stronger linguistic concordance with their family physician to report higher satisfaction scores. Francophones who regularly speak French with their family physicians were more satisfied ( $\bar{x} = 4.63$ ) than those who rarely/never speak French ( $\bar{x} = 4.29$ ,  $F_{(1; 83)} = 4.852$ ;  $p < 0.05$ ). There was also a statistically significant interaction between the patients' language of preference and the service language. Francophones who prefer French and regularly speak it with their family physician (linguistic concordance;  $\bar{x}_{adj} = 4.82$ ) were significantly more satisfied than those who prefer French yet rarely/never speak it (linguistic discordance;  $\bar{x}_{adj} = 4.06$ ,  $F_{(1; 75)} = 11.950$ ;  $p < 0.001$ ). Furthermore, a positive correlation between patient satisfaction and the active offer was observed in Francophones ( $r = 0.49$ ,  $p < 0.001$ ). The present findings provide evidence of the impact of linguistically adapted health care services on the satisfaction of Ontario Francophones and suggest that patient satisfaction may be improved through the active offer of FLS. A larger and more diverse sample is required to confirm these findings.

**Keywords:** patient- physician communication, linguistic concordance, patient satisfaction, active offer of French language services, Ontario Francophones.

## Résumé

La communication est essentielle pour fournir des soins primaires de qualité. La concordance linguistique entre patients et médecins a été liée à de meilleurs résultats de santé et à une plus grande satisfaction du patient. Bien que les canadiens francophones reconnaissent souvent des défis à accéder à des services de santé concordants sur le plan linguistique, le concept de l'offre active de services en français est apparu comme un moyen d'assurer la disponibilité de tels services et d'améliorer l'expérience des patients francophones. Cependant, l'impact de la concordance linguistique et de l'offre active des services de santé en français sur la satisfaction du patient francophone en Ontario demeure largement inconnu. Des sondages sur la satisfaction des patients ont été recueillis dans le cadre d'un programme de formation continue destiné aux médecins de famille du nord-est de l'Ontario. Les médecins participants ont distribué des sondages aux patients comprenant certaines questions sur la satisfaction du patient tirées du Physicians Achievement Review (PAR) et certaines questions tirées de la Mesure de l'offre active des services sociaux en français en contexte minoritaire. 235 patients ont rempli le questionnaire. Un peu moins de la moitié d'entre eux (44 %) se sont identifiés comme francophones, 62,6 % avaient un médecin de famille francophone ; cependant, seulement 17,2 % ont déclaré parler régulièrement en français avec leur médecin de famille. Comme nous l'avions prévu, les francophones qui ont une plus grande concordance linguistique avec leur médecin de famille ont eu tendance à obtenir des scores de satisfaction plus élevés. Les francophones qui parlent régulièrement en français avec leur médecin de famille étaient plus satisfaits ( $\bar{x} = 4,63$ ) que ceux qui parlent rarement/jamais en français ( $\bar{x} = 4,29$ ,  $F_{(1 ; 83)} = 4,852$  ;  $p < 0,05$ ). Il y avait également une interaction statistiquement significative entre la langue de préférence des patients et la langue du service. Les francophones qui préfèrent le français et le parlent régulièrement avec leur médecin de famille (concordance linguistique ;  $\bar{x}_{ajusté} = 4,82$ ) étaient significativement plus satisfaits que ceux qui préfèrent le français, mais le parlent rarement/jamais (discordance linguistique ;  $\bar{x}_{ajusté} = 4,06$ ,  $F_{(1 ; 75)} = 11,950$  ;  $p < 0,001$ ). En outre, une corrélation positive entre la satisfaction des patients et l'offre active a été observée chez les francophones ( $r = 0,49$ ,  $p < 0,001$ ). Les présents résultats fournissent des preuves de l'impact des services de santé linguistiquement adaptés sur la satisfaction des francophones de l'Ontario et suggèrent que la

satisfaction peut être améliorée par l'offre active des services de santé en français. Un échantillon plus large et plus diversifié est nécessaire pour confirmer ces résultats.

**Mots-clés:** communication patient-médecin, concordance linguistique, satisfaction du patient, offre active des services de santé en français, francophones de l'Ontario.

**Acronyms used in this article**

FOLS = First Official Language Spoken  
FLS = French Language Services  
FSP = French-Speaking Physicians  
NFSP = Non-French-Speaking Physicians  
PAR = Physicians Achievement Review

### **The Impact of Linguistic Concordance and the Active Offer of French Language Services on Patient Satisfaction**

Interpersonal communication is at the heart of primary health care delivery and has long been considered the essential tool of primary care physicians. Effective communication is vital in patient's ability to understand medical information and to cope with diseases (Nouri & Rudd, 2015; Ong et al. 1995). It has been linked to a higher quality of care (Bensing, 1991; Matusitz & Spear, 2014) and improved health outcomes (Matusitz & Spear, 2014; Stewart 1995). However, for many Francophones in Ontario, language barriers challenge the quality of this communication. Although French-speaking physicians are relatively numerous in the province (Gauthier et al., 2012), the majority are located in communities where fewer Francophones reside (Timony et al., 2013), leaving many communities with large Francophone populations potentially underserved. Such patient/physician linguistic discordances have been linked to reduced comprehension and compliance with physician instructions, increased risk of adverse medication reactions, increased risk of hospital admission, inadequate chronic disease management, and reduced diagnostic confidence (Bowen, 2001; Garra et al., 2010; Wilson et al., 2005). Furthermore, these linguistic discordances may be contributing to the health disparities observed in Ontario's Francophone populations (Bouchard et al., 2012; Picard & Allaire, 2005). Indeed, a study of Canadian Francophones found that language barriers resulted in poorer quality of care and patient safety (de Moissac & Bowen, 2019).

In addition to being linked to health outcomes, physician communication is an important determinant of patient satisfaction (Crow et al., 2002). Boissy and colleagues (2016) concluded that patient satisfaction could be improved through physician communication training. Anderson, Barbara and Feldman (2007) found that physician communication is a key quality of health care that influences patient satisfaction. Communication was considered particularly influential when the physician listened to patient concerns, included patients in the health care process, and provided adequate information. Though none of these behaviours are directly related to language, all would be limited in the presence of a language barrier. Such arguments are supported by research from the United States, which found that Spanish-speaking patients are

more satisfied with their health care experience when provided by a Spanish-speaking provider (Dunlap et al., 2015; Flower et al., 2017).

Furthermore, patient satisfaction is associated with quality of care, with positive patient experiences linked to best practice clinical procedures, better patient outcomes and reductions in avoidable hospital utilization (Anhang Prince et al., 2014). Although there is no universally accepted tool for measuring quality of care, patient satisfaction surveys are widely included as one indicator of quality, among others, and are often used to assess quality improvements (Dileep & Rau, 2010; Gill & White, 2009; Rashid & Jusoff, 2009; Säilä et al., 2008; Woodward et al., 2000). While some consider patient satisfaction to be the most important indicator of quality given the subjective nature of quality and the importance of the patient experience in developing patient-centred strategies (Faezipour & Ferreira, 2013; Gupta & Rokade, 2016; Naidu, 2009), others criticize its validity, given that patient assessments can be emotionally affected and that patients often lack the experience and knowledge needed to effectively evaluate certain physician competencies such as diagnostic and therapeutic interventions (Gill & White, 2009; Naidu, 2009).

The literature often divides quality of care into two categories; technical quality refers to a provider's level of competence, clinical skills and diagnostic accuracy, whereas functional quality refers to the way care is provided, including the provider's interpersonal skills and patient-physician interactions (Hamed & De Lusignan, 2013; Rashid & Jusoff, 2009). Since patients are largely unable to judge technical quality, they often rely on functional aspects when assessing health care quality. In fact, most authors recognize patient satisfaction scales as an appropriate method of measuring the interpersonal component of care (Gill & White, 2009; Rashid & Jusoff, 2009).

Naidu (2009) proposed a compellingly explanation of the interplay between patient satisfaction and quality of care. According to Naidu, both the patient and the provider contribute to quality of care (Naidu, 2009). While the provider diagnoses, suggests treatment plans, prescribes medication and makes referrals, the patient must accurately describe their symptoms, undergo treatment, take their medication and attend referral appointments. As a result, quality of care depends on both provider competence and patient adherence, which combine to produce health outcomes. According to this model, patient satisfaction influences quality through loyalty to their provider (Naidu, 2009). It is largely accepted that patient satisfaction is associated with positive health behaviours, such as adherence to treatment plans, compliance with medication and persistence with therapeutic interventions, which in turn encourages providers to prescribe more comprehensive treatment options, thus further improving the quality of care provided (Anhang Price, et al, 2014; Barbosa, et al., 2012; Ivany & Lane, 2020). Therefore, patient satisfaction is not measured to assess a provider's level of technical quality, but to determine the extent to which a provider's level of functional quality will influence the likelihood that patients will comply with the technical provision of care. As a result, barriers to the functional quality that negatively influence patient satisfaction, such as linguistic discordances, can, in turn, negatively influence the technical quality and patient health outcomes.

French is constitutionally recognised as an official language (Minister of justice, 1982). The ‘right’ to receive government services in French is protected nationally by the Official Languages Act of 1969 (Minister of Justice 1985) and provincially in Ontario by the French Language Services Act of 1986 (Minister of Justice, 1990). French language services (FLS) in the public sector were further acknowledged in a 2006 document by the Secretary of Cabinet, which defined an “active offer” as the act of informing Francophones of the availability of services in French and ensuring their access to and satisfaction with these services (Ontario Public Service, 2006). In the context of health care delivery, Bouchard, Beaulieu and Desmeules (2012) added that an active offer is a verbal or written invitation to express oneself in the official language of their choice and that this invitation must precede the request for such services. Savard, Casimiro, Benoit, and Bouchard (2014) further explained that the goal is to offer services adapted to the linguistic minorities’ culture to ensure Francophones feel comfortable when receiving health care services. Thus, the active offer is more than simply the offer of services in both official languages; it is an example of patient-centred care that acknowledges the importance of culture and language. However, in Ontario, a vicious circle can be observed in which health care providers offer fewer services in French when there is little demand (Office of the French Language Services Commissioner, 2016) and Francophones are less likely to demand service in French if there is no offer (Forgues et al., 2014). The offer of linguistically concordant services is further hampered by a belief that French services are unnecessary given the pervasiveness of bilingualism in Ontario Francophones (Timony et al., 2016). Such attitudes are particularly problematic given that physicians are not subject to FLS legislation, and the offer of FLS by physicians is strictly voluntary (Cardinal et al., 2018).

Although poor communication can negatively influence health outcomes and patient satisfaction, little is known about patient satisfaction or the extent to which linguistic concordance influences satisfaction in Ontario’s Francophone population. In addition, although it is largely believed that the “active offer” of FLS can improve the Francophone patient experience, to our knowledge, no study has explored the impact of the “active offer” on patient satisfaction.

## **Purpose and Hypothesis**

The current study explores the degree to which language concordant physician interactions and the active offer of FLS influence patient satisfaction among Francophones living in Northeastern Ontario. Three important elements have motivated this research. First, there is a high concentration of French communities within Northeastern Ontario. Second, the distribution of French-speaking family physicians is less favourable in the Northeast (Timony et al., 2013). Third, though the link between communication and patient satisfaction is well established, little research has been dedicated to the impact of language concordance on northern Francophone populations. We hypothesized that 1) Francophones who experience stronger linguistic concordant interactions with their family physician will be more satisfied with their care, and 2) the active offer of FLS will be associated with greater patient satisfaction.

## Methods

Data was collected through a continuing education program entitled “Ici on parle! How to Actively Engage Francophone Patients: Tools for French and English Speaking Physicians” (Timony et al., 2018). This 3-phase program, accredited by the College of Family Physicians of Canada, consisted of physician, patient and receptionist surveys in Phase 1; personalized reports and a workshop in Phase 2; and post-program physician surveys in Phase 3. Family physicians and general practitioners from Northeastern Ontario were invited to participate in the education program through numerous channels, including email advertisements sent out by the local medical school (Northern Ontario School of Medicine), health planning agencies (North East Local Health Integration Network and Réseau du mieux-être francophone du Nord de l’Ontario), and letters faxed directly to primary care offices. The first phase acted as a needs assessment in which physicians reflected on their “active offer” behaviours and were instructed to randomly distribute 40 patient survey packages to their adult patients while attempting to maintain an equal representation of French-speaking and non-French-speaking patients. Surveys were available in both French and English and no exclusion criteria were applied to the participation of providers or patients. The present paper focuses strictly on the Phase 1 patient survey, collaboratively developed by a committee consisting of Francophone health researchers, health education experts and French-speaking physicians. This questionnaire consisted of:

- demographic questions (i.e. gender, age, postal code, language),
- a self-rate health status question (a 5 point scale ranging from “excellent” to “poor”),
- the frequency of French interactions with their family physicians
- patient satisfaction scales
- the language of preference when receiving health care services
- active offer questions

Ethical approval for this study was obtained from Laurentian University’s Research Ethics Board (file number 6008383).

## *Measuring Patient Satisfaction*

Patient surveys consisted primarily of questions from the patient questionnaire of the 2006 Physician Achievement Review (PAR) (Sargeant, 2006), which uses a 5 point Likert scale (ranging from 1 = “Strongly Disagree” to 5 “Strongly Agree”). Given the link between communication and satisfaction explored in the current study, only the 24 PAR questions related to “professionalism and communication” identified by Lockyer, Violato and Fidler (2007) were used.

This version of the PAR was selected because it was developed for a Canadian physician regulatory body, the College of Physicians and Surgeons of Alberta with the intent of assessing physicians. The PAR has been translated and validated in French and has impressive reliability and validity indices (i.e. strong internal consistency and technical reliability (Hall et al., 1999; Sargeant et al., 2003; Sargeant, 2006) as well as strong concurrent validity and inter-rater

reliability (Hall et al., 1999; Sargeant, 2006; Violato & Hall, 2000). Results from the PAR have also been used to compare groups of physicians. Lockyer, Violato, Wright and Fidler (2009) detected a difference in patient scores on the 24 PAR patient survey questions related to “professionalism and communication” when grouped by the medical school attended by the patient’s physician. The use of this patient survey is further supported by physicians, who agreed that patients were the most appropriate source to assess their practice (Sargent et al., 2003). Furthermore, the PAR patient survey closely resembles other patient satisfaction surveys with primary care physicians (Hojat et al., 2011). Thus, in the present study, patient satisfaction of each participant was considered the average score of the 24 PAR patient survey questions related to “professionalism and communication”. This method accounts for missing data by imputing a prorated scale score that fills in missing values with the individuals’ average scores from all completed questions (Mazza et al., 2015; Quan & Ghali, 2006; Shrive et al., 2006). This method is appropriate when data have lower percentages of missing values (Shrive et al., 2006) with a 20% cut-off point often being applied (Mazza et al., 2015). Thus, satisfaction scores were suppressed if 20% or more of the PAR patient survey questions were unanswered.

### ***Measuring Language Concordance/Discordance***

To explore the relative importance of language on patient satisfaction, three indicators of linguistic concordance were considered. First, the language spoken by the patient was compared to the language of competence of their physician. Statistics Canada’s first official language spoken (FOLS) was used to define the patient’s language. This variable is defined by collecting and combining data on mother tongue, knowledge of Canada’s two official languages and the language most often spoken at home (Statistics Canada, 2021). The FOLS was calculated following the steps described by Statistics Canada (2016). Patients classified as “French” or “French and English” were considered Francophone. Physician language competency was identified through the physician directory from the College of Physicians and Surgeons of Ontario (College of Physicians and Surgeons of Ontario, 2019). Physicians who indicated French as a language of competence were considered French-speaking physicians (FSP), while those who did not were considered non-French-speaking physicians (NFSP). However, being able to practice in French does not ensure the provision of services in French. Therefore, the second indicator of linguistic concordance compared the patient’s FOLS with the service language. Patients who indicated that they “Always, 100% of the time” or “Often, more than 50% of the time” speak with their physician in French were considered as regularly receiving a FLS, whereas those who indicated “Sometimes, less than 50% of the time” or “Never, 0% of the time” were considered as rarely/never receiving such services. The third indicator of linguistic concordance considered the patients’ language of preference (French vs. English) when receiving health care services and compared this preference to service language. Each subsequent indicator of linguistic concordance is considered stronger than the last, with concordance between language of preference and service language being the strongest.

### ***Measuring the Active Offer of FLS***

Within primary care practices, the active offer of FLS is much more than simply ensuring linguistic concordance between patients and their physicians. The active offer involves an organizational restructuring to ensure that leadership is sensitized to the needs of Francophone patients, that the workplace culture encourages the offer of FLS, that highly qualified bilingual staff are recruited and retained, that efforts are made to ensure continuity of care in French when making referrals and that French services are clearly communicated, visible, available at all times and easily accessible (Ministry of Francophone Affaires, 2014; Regroupement des entités de planification, 2015). Each of these factors can influence patient satisfaction, in addition to the presence or absence of linguistic concordance. As a result, the present study's patient survey included select questions from the Active Offer of French Language Services in Minority Context Measure (Savard et al., 2014). This two-part questionnaire was developed for health care providers who rate themselves and their work environment. Six items from the "Reception and Patient Management" sub-theme were included in the patient survey. Questions chosen related directly to patient interactions and asked patients to evaluate the visibility of FLS offered at the practice, the presence of French greetings, the frequency with which language of preference is asked, and the availability of French documentation. Each item was rated on a four-point frequency scale (never, rarely, often, always). An active offer score was calculated for each participant by averaging these six items. Once again, data were suppressed if 20% of the corresponding items were missing.

### ***Data Analysis***

The influence of each indicator of linguistic concordance (1: patient's FOLS by physician's language of competence; 2: patient's FOLS by service language; and 3: preferred language by service language) on patient satisfaction was analyzed by conducting three independent multivariate analyses of variance (MANOVA) followed by three complementary multivariate analyses of covariance (MANCOVA) which controlled for the patient's age (continuous variable), sex (dichotomous variable) and self-assessed health status (5-point ordinal scale ranging from Excellent to Poor, dummy coded for use as a covariate), each of which has been shown to independently influence satisfaction (Rahmqvist, 2001; Batbaatar 2017). Fisher's Least Significant Difference (LSD) post-hoc tests were performed when statistically significant interactions were observed. Furthermore, a Person Correlation was used to explore the relationship between patient satisfaction and the active offer of FLS. All analyses were conducted using IBM SPSS Statistics, version 24.

### ***Results***

A total of 235 completed patient surveys were received from 11 physicians who participated in the continuing education program. Francophone patients represented 44% of the sample. On average, respondents were 54 years of age (range 15 - 87), and 68.4% were women. Although 62.6% of respondents had a physician who was competent enough to practice in



French, only 17.2% reported regularly speaking in French with their physician, with more Francophones reporting regular French interactions than Anglophones (33% vs. 4.3%). When asked their language of preference when receiving health care services, 20.6% indicated that they prefer French. This preference was greater in Francophones than Anglophones (39.8% vs. 5%) (Table 1).

**Table 1**

*Respondent Characteristics*

		Patient's First Official Language Spoken		
		French & English	English only	Total
Sample count		103 (44.0%)	132 (56.0%)	235 (100%)
Age	Mean	53.6	54.6	54
	Min	15	20	15
	Max	84	87	87
Sex	Women	67 (65.7%)	93 (70.5%)	160 (68.4%)
	Men	35 (34.3%)	39 (29.5%)	74 (31.6%)
Physician Language of Competence	FSPs	66 (64.1%)	81 (61.4%)	147 (62.6%)
	NFSPs	37 (35.9%)	51 (38.6%)	88 (37.4%)
Service Language (FLS received)	Regularly	34 (33.0%)	6 (4.6%)	40 (17.2%)
	Rarely/Never	69 (67.0%)	124 (95.4%)	193 (82.8%)
Language of Preference	French	39 (39.8%)	6 (5.0%)	45 (20.6%)
	English	59 (60.2%)	114 (95.0%)	173 (79.4%)

*The influence of Language concordance on patient satisfaction*

**Indicator of linguistic concordance 1: Patient's FOLS by physician language of competence.** Table 2 describes the distribution of patient satisfaction scores across the categories of the patient's FOLS and the physician's language of competence. Francophones with French-Speaking Physicians (FSPs) had the highest satisfaction scores ( $\bar{x} = 4.52$ ) followed by Anglophones with FSPs and Non-French-Speaking Physicians (NFSP) ( $\bar{x} = 4.40$  each) and finally Francophones with NFSPs, who had the lowest satisfaction scores ( $\bar{x} = 4.34$ ). A MANOVA found no main effect of the patient's FOLS ( $F_{(1; 209)} = 0.05$ ;  $p = 0.823$ ) or the physician's language of competence ( $F_{(1; 209)} = 0.630$ ;  $p = 0.428$ ) and no interaction between these two variables was observed ( $F_{(1; 209)} = 0.797$ ;  $p = 0.373$ ). Similarly, a MANCOVA found no main effect or interaction when controlling for the influence of age, sex and health status.

**Table 2**

*Distribution of patient satisfaction score across categories of patient's language spoken and physician's language of competence using MANOVA and MANCOVA*

Patient's First Official Language Spoken					
	French		English		
	Physician language of competence				
Satisfaction score	FSP	NFSP	FSP	NFSP	
$\bar{x}$	4.52	4.34	4.40	4.40	MANOVA $F$ ( $P$ value)
(SD)	(0.51)	(0.76)	(0.80)	(0.90)	0.80 (p = 0.373)
$\bar{x}_{adj}$	4.52	4.34	4.41	4.47	MANCOVA $F$ ( $P$ Value)
(SE)	(0.10)	(0.13)	(0.09)	(0.11)	1.26 (p = 0.263)
95% CI	4.3-4.7	4.1-4.6	4.2-4.6	4.3-4.7	

**Indicator of linguistic concordance 2: Patient's FOLS by service language.** The distribution of patient satisfaction scores across the patient's FOLS and the service language categories is described in Table 3. Francophone patients who regularly speak French with their family physician were the most satisfied group ( $\bar{x} = 4.65$ ) while those who rarely/never receive services in French were the least satisfied ( $\bar{x} = 4.37$ ), with satisfaction scores for Anglophones falling between the two. Caution should be used when interpreting satisfaction scores of Anglophones who regularly receive services in French as only five respondents fell into this category. Once again, a MANOVA found no main effect of the patient's FOLS ( $F_{(1; 207)} = 0.32$ ;  $p = 0.857$ ) or of the service language ( $F_{(1; 207)} = 1.098$ ;  $p = 0.296$ ) and no interaction was observed ( $F_{(1; 207)} = 0.134$ ;  $p = 0.715$ ). Likewise, a MANCOVA found no main effect or interaction after controlling for age, sex and health status.

**Table 3**

*Distribution of patient satisfaction score across categories of patient's language spoken and service language using MANOVA and MANCOVA*

Patient's First Official Language Spoken					
	French		English		
	Service Language (FLS Received)				
Satisfaction score	Regularly	Rarely/ Never	Regularly	Rarely/ Never	
$\bar{x}$	4.65	4.37	4.54	4.41	MANOVA $F$ ( $P$ value)
(SD)	(0.35)	(0.68)	(0.64)	(0.85)	0.134 (p = 0.715)
$\bar{x}_{\text{adj}}$	4.69	4.37	4.59	4.44	MANCOVA $F$ ( $P$ Value)
(SE)	(0.15)	(0.90)	(0.33)	(0.07)	0.192 (p = 0.661)
95% CI	4.3-5.0	4.2-4.5	3.9-5.2	4.3-4.6	

**Indicator of linguistic concordance 3: Patient's language of preference by service language.** Given that the largest differences in the previous analyses were observed between Francophones who were, and were not, receiving French services (i.e. had a FSP vs. NFSP and were regularly vs. rarely/never receiving FLS), along with the fact that little variation was observed in Anglophones regardless of their physicians language of competence or service language, only Francophones were considered in the following analyses. Table 4 shows the patient satisfaction scores across the language of preference and the service language categories. When observing the unadjusted means, Francophones who regularly speak French with their family physician were equally satisfied regardless of their language of preference ( $\bar{x} = 4.67$  for those who prefer French and 4.63 for those who prefer English), followed by Francophones who prefer English and rarely/never speak French ( $\bar{x} = 4.43$ ) and finally Francophones who prefer French but rarely/never speak it ( $\bar{x} = 4.15$ ).

**Table 4**

*Distribution of Francophone patient satisfaction score across categories of patient's language of preference and service language using MANOVA and MANCOVA*

Francophone patient language of preference					
Satisfaction score	French		English		
	Service Language (FLS Received)				
	Regularly	Rarely/ Never	Regularly	Rarely/ Never	
$\bar{x}$	4.67	4.15	4.63	4.43	MANOVA $F$ ( $P$ value)
(SD)	(0.35)	(0.73)	(0.35)	(0.67)	0.817 (p = 0.369)
$\bar{x}_{adj}$	4.82	4.06	4.48	4.44	MANCOVA $F$ ( $P$ Value)
(SE)	(0.16)	(0.15)	(0.20)	(0.09)	4.99 (p < 0.05)
95% CI	4.5-5.1	3.8-4.4	4.1-4.9	4.3-4.6	

A MANOVA found no main effect of the patient's language of preference ( $F_{(1; 83)} = 0.786$ ;  $p = 0.378$ ). However, a main effect of the service language was observed ( $F_{(1; 83)} = 4.852$ ;  $p < 0.05$ ) with Francophones who regularly speak French ( $\bar{x} = 4.63$ ) being significantly more satisfied than those who rarely/never speak French ( $\bar{x} = 4.29$ ). The service language explains 6% of the variance in satisfaction. No interaction was observed in this MANOVA ( $F_{(1; 83)} = 0.817$ ;  $p = 0.369$ ). After controlling for age, sex and health status, a MANCOVA once again did not detect a main effect of patient's language of preference ( $F_{(1; 75)} = 0.015$ ;  $p = 0.903$ ). However, the main effect of service language persisted ( $F_{(1; 75)} = 2.194$ ;  $p < 0.05$ ) (Francophones who regularly speak French were once again significantly more satisfied,  $\bar{x}_{adj} = 4.65$  vs. 4.25) and a significant interaction between the language of preference and the service language was observed ( $F_{(1; 75)} = 4.995$ ;  $p < 0.05$ ). The main effect of the service language and the interaction explained 8% and 6% of the variance in satisfaction respectively.

The subsequent analyses of the simple effect indicate that the influence of language of preference on patient satisfaction is significant when Francophones rarely/never speak to their family physician in French ( $F_{(1; 75)} = 4.920$ ;  $p < 0.05$ ) but not when they regularly speak it. The Post Hoc analysis of this simple effect shows that Francophones who prefer French but rarely/never speak it were significantly less satisfied than those who prefer English and rarely/never speak French ( $\bar{x}_{adj} = 4.06$  vs. 4.44 respectively). Additionally, the analysis of the simple effects of service language were significant for Francophones who prefer to receive services in French ( $F_{(1; 75)} = 11.950$ ;  $p < 0.001$ ), but not for those who prefer English. The Post Hoc analysis of this simple effect confirmed that Francophones who prefer French and regularly speak it were significantly more satisfied than those who prefer French yet rarely/never speak it ( $\bar{x}_{adj} = 4.82$  vs. 4.06 respectively).

**The relationship between the Active Offer of FLS and patient satisfaction.** When exploring the relationship between the active offer of FLS and patient satisfaction, we observed a weak yet significant correlation in the entire sample,  $r = .26$ ,  $p_{(one-tailed)} < 0.01$ . Patients become more satisfied as they perceive receiving a greater active offer of FLS (i.e. higher active offer scores). However, this correlation completely disappears when considering only Anglophone patients ( $r = .06$ ,  $p_{(one-tailed)} = 0.35$ ), and becomes much stronger when exclusively considering Francophones ( $r = .49$ ,  $p_{(one-tailed)} < 0.001$ ).

## Discussion

As hypothesized, there was a consistent trend for patient satisfaction scores to be higher when language concordant patient/physician interactions were stronger. Although differences may not have been statistically significant when considering the weakest indicators of concordance (i.e. the patient's FOLS by the physicians language of competence and the patient's FOLS by the service language), there was a clear tendency for Francophones with a FSP and Francophones who reported regularly speaking in French with their family physician (i.e. linguistic concordance) to be the most satisfied, while those with a NFSP and those who

rarely/never speak in French (i.e. linguistic discordance) were consistently the least satisfied. No differences in satisfaction were observed between Francophone and Anglophone patients. However, when exploring the strongest indicator of linguistic concordance (i.e. the language of preference by the service language) in Francophones alone, those who prefer French and regularly speak it (linguistic concordance) were significantly more satisfied than those who prefer French yet rarely/never speak it (linguistic discordance).

These tendencies are consistent with research on the Spanish-speaking population in the United States (Dunlap et al., 2015; Flower et al., 2017) and provide further evidence that language discordances are a barrier to patient satisfaction. However, this is the first time such differences in satisfaction have been found in Ontario's Francophone population. Furthermore, though the underlining belief is that the active offer of FLS can improve the Francophone patient experience, to our knowledge, this is the first study to demonstrate an association between the active offer and patient satisfaction, such that Francophone patients became more satisfied as they perceived receiving a greater active offer. Additionally, since no such correlation was detected in Anglophone patients, we can surmise that the implementation of active offer strategies in primary care does not harm the Anglophone patient experience.

Results from this study provide evidence of the importance of linguistic concordant interactions and the active offer of FLS on patient satisfaction and may provide insight into the quality of care provided to French-speaking patients. Given the maldistribution of FSP throughout the province (Timony et al., 2013), linguistic discordant patient-physician interactions are more likely than linguistic concordant interactions. Even in the present sample, though 62.6% of respondents had a physician who was competent enough to practice in French, only 17.2% reported regularly speaking in French with their physician. Consequently, it is possible that many Francophone patients in Ontario are less satisfied with their care. Given the relationship between patient satisfaction and quality of care (Hekkert et al., 2009, Naidu, 2009; Woodward et al., 2000), these findings may help explain the poorer health outcomes observed in Ontario Francophones. As Naidu (2009) suggests, patients who are satisfied with the functional quality of care are more likely to comply with the technical provision of care by continuing to see their health care provider, returning for follow-up appointments, disclosing important medical information, complying with medical recommendations and actively participating in their treatment (Aharony & Strasser, 1993; Westaway et al., 2003).

It is important to note that satisfaction scores as a whole were quite high in the present study and, although there were clear and consistent trends in the data, there was limited variability in satisfaction scores across comparison groups. Two limitations of the study may help explain these high satisfaction scores. First, the demographic characteristics of the sample do not correspond to the demographic profile of Francophones in Northeastern Ontario (Stats Canada), with the present sample being older (median age of 57 vs. 46 in the region) with far more women (68.2% in this sample vs. 51.3% in the region). These differences are important considering both older patients and women have been found to be more satisfied with health care services (Batbaatar et al., 2017). Second, the sample was relatively small. A power analysis

based on the findings of Lockyer, Violato, Wright and Fidler (2009) revealed that 600 respondents would be needed to detect statistically significant differences in satisfaction using the PAR patient survey. However, the present sample consisted of only 235 respondents, which was further curtailed in analyses conducted strictly on Francophones (n=103). The fact that significant differences were detected in such a small sample suggests that these differences may be even more prominent in the population at large. A larger, more diverse and more representative sample may exhibit greater variability in satisfaction scores and trends observed in this study may become more pronounced.

Many factors, which have been found to influence patient satisfaction, were not considered in the present study. These include provider characteristics, such as accessibility and continuity of care (i.e. receiving timely care from the same providers), and efficacy of care (i.e. improved health outcomes) as well as patient characteristics, such as education level, socio-economic status, personality and expectations (Batbaatar et al., 2017). Future studies should account for such factors and consider the impact of language concordance on satisfaction with other components of care such as clinical competency, physician access or the physical environment. Additionally, a more nuanced measure of active offer from multiple sources (e.g., patients, providers, and support staff) would be needed to determine how active offer strategies beyond the patient's perception (i.e. at the organizational level) could affect patient satisfaction. Finally, a larger scale recruitment with a more diverse and representative sample would be needed to confirm the present findings.

The health care system in the province of Ontario is currently evolving. Recent changes legislates the integration of health care providers into new Ontario Health Teams with the goal of placing patient experiences and outcomes at the center of the delivery of care (Legislative Assembly of Ontario, 2019). This new legislation also acknowledges the role of the French Language Services Act in the realm of health care delivery in a way that was not previously seen, by stating that the Ontario Health Teams must adhere to the requirement of the act when serving Francophone communities. The former French Language Services Commissioner of Ontario has long advocated for the use of the active offer of French language services as a means of adhering to the French Language Services Act (FLSA) and as an essential tool to providing linguistically adapted services to Ontario's Francophone population (Office of the French Language Services Commissioner, 2016).

The current findings support the importance of linguistic concordant interactions between patients and physicians. Although no differences in satisfaction were observed between Francophones and Anglophones, Francophones who reported stronger linguistic concordant interactions with their family physician were significantly more satisfied with their care. Specifically, concordance between the patients' FOLS and the service language evoked higher satisfaction scores, with satisfaction being further improved in instances of concordance between the patient's language of preference and the service language. Furthermore, the present findings support the French Language Services Commissioner's position on the role of the active offer in improving the Francophone patient experience, with higher active offer scores associated with

greater satisfaction. The current period of health system reform marks an ideal opportunity to introduce active offer strategies to the Ontario Health Teams, thus ensuring adherence to the FLSA, encouraging linguistic concordant interactions, and contributing to the overall goal of improving patient experiences.

## Conclusions

The present study provides evidence of the impact of patient/physician language concordance on patient satisfaction in Ontario Francophones. Of note, Francophone patients who prefer to receive services in French but rarely or never speak to their provider in French (linguistic discordance) were significantly less satisfied with their care, while those who prefer French and regularly receive services in French (linguistic concordance) were more satisfied. This study also provides evidence of the link between the active offer of FLS and patient satisfaction. Patients become more satisfied when they perceive a greater active offer of FLS. These findings provide evidence of the importance of linguistically adapted health care services in Ontario, contrary to the prevailing belief that FLS are unnecessary given the prevalence of bilingualism (Timony et al., 2016) and the perceived lack of demand of such services from this linguistic minority population (Office of the French Language Commissioner, 2016; Forgues et al., 2014). The present results also imply that patient satisfaction may be improved by enhancing the active offer of FLS within primary care practices. Thus, the active offer may be an effective strategy to improve the Francophone patient experience and ultimately contribute to reducing health inequalities experienced by Ontario Francophones.

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