

Challenges of Language Barrier on the Health Services in Multilingual Cameroon: The Case of the North West Region



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Abstract

This paper sets out to address the effects of the language barrier, resulting from the use of the two official languages (English and French), on the health sector in multilingual Cameroon where over 289 languages, including Pidgin English, exist. (Ethnologue, 2019). In Cameroon, communication is very difficult in public sectors such as the courtroom (Atoh, 2008) and in the hospitals where the doctors meet patients from various linguistic backgrounds who cannot express themselves in English, French, or Pidgin English. This paper aims at investigating the problems caused by such communication breakdown and proposes a remedy to this language barrier. Using instruments such as interviews, questionnaire, and participant observation, data for this study were collected from fifty (50) less educated and uneducated patients and ten (10) educated medical doctors from two hospitals: one public hospital (Bamenda Regional Hospital) and one mission hospital (Mbingo Baptist Hospital), both in the North West Region of the country. Our primary language variable was derived using language designations collected from patients' registration databases. While employing both the quantitative and qualitative approaches, the data were analysed using two models and one theory which include the Transactional Model of Communication (Barnlund, 2018), the Interactionist Sociolinguistics Theory (Fishman, 1980), and the Cultural Competency Model (Brach and Fraser, 2000). The study reveals that the language barrier clearly exists in the hospitals found in both the rural and urban areas in the North West Region of Cameroon. Our findings conclude that understanding imbalances between languages can help address communication challenges across the Cameroonian health care sector and would reduce the number of deaths.

Keywords: *Language, Barrier, Health Services, Communication, Multilingual*

Introduction

Cameroon is home to more than 289 languages (native dialects) (Ethnologue 2020). English and French are official languages, a heritage of Cameroon's colonial past as both a colony of the United Kingdom and France from 1916 to 1960. The nation strives toward official bilingualism, but in reality, very few Cameroonians speak both French and

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English, and many speak neither of the two. The government has established several bilingual schools in an effort to teach both languages more evenly. Cameroon Pidgin English (CPE), has in many ways been the lingua franca of Cameroon since the 1880s. It is commonly used as a vehicle for enhancing communication in this bilingual country. CPE has several variations based upon where it is used - in Grass fields, in the Catholic Church, in the Francophone areas of the country, in the Southwest and Northwest regions of the country.

There are various providers of health care within the country. The government runs health units, which include two Reference Hospitals (one in Douala and the other in Yaounde), ten Regional Hospitals (found in all the 10 regions of the country), and a good number of District Hospitals. In some provincial and district hospitals there are specialists in some disciplines of medicine. Also, integrated health centers exist to serve a few surrounding villages in which nurses, their aides, and midwives provide the care. (Weinger and Akuru, 2007). Language barriers are a fundamental contributor to gaps in health care. In the clinic setting, patients who do not speak English well have less access to a usual source of care and lower rates of physician visits and preventive services. Even when patients with language barriers do have access to care, they have poorer adherence, decreased comprehension of their diagnoses, decreased satisfaction with care, and increased medication complications. Differences in language between health care providers and patients increasingly impose barriers to health care. The purpose of this paper is to describe the relation of language barriers among speakers of the many Cameroonian languages and the official languages and to examine how language barriers may contribute to health disparities among these populations. Language barriers between patients and health care providers may affect all three outcomes (i.e., disease incidence, health outcomes, or access to care).

Language is the means by which patients learn about services, and make decisions about their health behaviours (Woloshin, Schwartz, Katz, & Welch, 1997). Language is also the means by which the health care providers access patients' beliefs about health and illness and thus, create an opportunity to address and reconcile different belief systems. In essence, communication between nurses/doctors and patients is the heart of nursing care/treatment. Some studies have examined whether patients with language barriers receive worse hospital care in terms of quality or efficiency. It is for this reason that the authors of this paper decided to investigate the effects of the language barrier on the health of patients in the Northwest Region of the country.

The Problem and Hypothesis

Effective communication is a marker of health care quality in every sphere. The shared language between patients and health care providers enhances gathering information for the diagnosis, explaining treatment strategies, and ensuring understanding and joint decision-making. This is not always the case in Cameroon because, in several Regional and District hospitals, patient-doctor communication is sometimes difficult because the doctors meet patients from various linguistic backgrounds, who cannot adequately express themselves in English, French, or Pidgin English and vice-versa. This problem gets even worse when the doctors who are mainly or purely French-speaking (Francophones) or English-speaking (Anglophones) meet patients in the North West Region of the country who have no knowledge of the doctor's official language.

This problem encourages the researchers to investigate the effects of the language barrier, resulting from the use of the two official languages (English and French) and Pidgin English, over the indigenous languages on the health sector in the North West Region of Cameroon. Tentatively, the researchers hypothesize that language barriers contribute to reducing both patients' and medical providers' satisfaction and that effective communication is a marker of health care quality. The shared language between patients and health care providers enables ensuring understanding and joint decision-making for health care services.

Review of Related Literature

Taking into cognizance conceptual, empirical, and theoretical review, a number of articles and books were reviewed for this study, some of which are (Derose & Baker, 2000; David & Rhee, 1998; Feinberg, Swartz, Zaslavsky, Gardner, & Walker, 2002; Meredith, Stewart, & Brown, 2001; Jacobs *et al.*, 2001; Hampers *et al.*, 1999; 1999; Kravitz, Helms, Azari, Antonius, & Melnikow, 2000); and chart review (Heilemann, Lee, Stinson, Koshar, & Goss, 2000). Overall, these studies indicate those language barriers are associated with lack of awareness about health care benefits (Feinberg *et al.*, 2002), less insured status (Hampers *et al.*, 1999), longer visit time per clinic visit (Kravitz *et al.*, 2000), less frequent clinic visits (Derose & Baker, 2000), less understanding of the physicians' explanations (David & Rhee, 1998; Gerrish, 2001), more lab tests (Hampers *et al.*, 1999), more emergency room visits (Hampers *et al.*, 1999), less follow up (Kravitz *et al.*, 2000), and less satisfaction with health services (Meredith *et al.*, 2001; Morales, Cunningham, Brown, Liu, & Hays, 1999). Because these are observational studies (i.e., descriptive study design), no causal relations can be established between a language barrier and these negative consequences. This study, therefore, investigates the consequences of a language barrier in a multilingual country.

Theoretical Framework

The researchers adopted two models and a theory in order to explain and analyse the data in the study. They are the Transactional Model of Communication (TMC) Barnlund (2018), which holds that individuals are simultaneously engaged in the sending and receiving of messages and that giving and receiving messages are reciprocal. Barnlund (2018) broke down communication into two types: interpersonal (encoding and decoding messages within one's self) and intrapersonal (encoding and decoding messages with another person). Secondly, Interactionist Sociolinguistics Theory Fishman (1980) was employed, which is principally interested in what language use is in social processes, and therefore, a central concern is the social meaning of language use. These theories are apt for this study because they handle language and communication issues.

Lastly, the Cultural Competency Model by Brach and Fraser (2000) was also used to analyse the data collected. This model holds that based on the understanding of the cultural competencies of patients, interpreter services can reduce health disparities. They also argue that culture, defined as an "integrated pattern of human behaviour that includes thoughts, communications, actions, and religious or social group" (Cross *et al.*, 1989:145), and language go hand-in-glove. The theory is concerned with the interaction of linguistic and social systems; in this view, the significance of language is symbolic. Therefore, it is probably necessary to view the language barrier since there is merit to examining the direct link between language barriers, racial, and ethnic health disparities.

This is so because a provision of interpretation is a tangible, yet costly hypothesized solution.

Methodology

Data for this study were collected from a random and snowball sampling of 60 respondents who were made up of 50 less educated and uneducated patients and ten (10) medical doctors in one public hospital (Bamenda Regional Hospital) and one mission hospital (Mbingo Baptist Hospital) in the North West Region of the country. The triangulation (mixed) method of Patton (1999), was used to collect data for this study. The instruments used to collect the relevant data include interviews, questionnaire, and participant observation. Both the qualitative and quantitative methods were employed to analyse the data. These techniques served to collect, observe, describe, interpret, and analyse the level of the language barrier that exists in the health sector in Cameroon. A good observation required interaction with the patients and doctors, thus self-immersion in the study area. The interaction was necessary especially during activities that commanded the use of more than one language or a switch from one language to another. The bi(multi)lingual approach was employed for the collection of the data. Both primary and secondary sources of relevant literature were used.

Data Presentation and Analysis

This section of the paper presents, describes and analyses the data provided in this study and discusses the results of the data obtained from the field.

Table 1: Distribution of the actual sample size according to age and sex (for both patients and doctors)

<i>Age and Sex: Cross tabulation</i>					
Age range			Sex		Total
			Male	Female	
40-49	Count		3	3	6
	% within Age		50.0%	50.0%	100.0%
50-59	Count		5	5	15
	% within Age		50.0%	50.3%	100.0%
60-69	Count		6	4	10
	% within Age		60.0%	40.0%	100.0%
70-79	Count		10	10	20
	% within Age		50.0%	50.0%	100.0%
80+	Count		6	6	12
	% within Age		50.0%	50.0%	100.0%
Total		Count	30	30	60
		% within Age	50.0%	50.0%	100.0%

Source: Conceived by the researchers, May 2021

Table one (1) above shows that the age range which participated in the answering of the questions for this research came from 40 to 80+ age range. This actually helped greatly to provide information that enabled the researchers to reach the expected results. The older population (between the age range of 50 and above) which were 54 in number with 90.0 % participated best and they were the most reliable source of information for the study.

This is because they have very little knowledge of the official languages (English and French) and the Pidgin English; (lingua franca) used in the study. The same number thirty (30) was used for males and females with 50% for each sex in order to avoid gender bias.

Table 2: Distribution of the population according to place of birth (for both patients and doctors)

Place of birth	Frequency	Percent
Douala	4	6.7%
Yaoundé	3	5.0%
Buea	2	3.3%
Kumba	2	3.3%
Bamenda	15	25.0%
Fundong	5	8.3%
Kumbo	8	13.3%
Ndop	6	10.0%
Belo	5	8.3%
Wum	5	8.3%
Mbingo	5	8.3%
Total	60	100.0%

Source: Conceived by the researchers, May 2021

Table two (2) above shows that even though the respondents were born in their respective villages (from the data collected), they migrated to live in different areas due to uncontrollable reasons such as marriage, the search for jobs, socio-political crises, etc. However, they still master their dialects and even other dialects despite their places of residence.

Table 3: Languages spoken by respondents (for both the patients and doctors)

Languages spoken by respondents		
Languages	No.	Percentages
English	5	8.3%
French	3	5.0%
Pidgin English	12	22%
Kom	4	6.7%
Babanki	4	6.7%
Bambili	4	6.7%
Bafut	4	6.7%
Bambui	4	6.7%
Nkwen	4	6.7%
Mankon	4	6.7%
Mendankwe	4	6.7%
Moghamo	4	6.7%
Fulfulde	4	6.7%
TOTAL	60	100.0%

Source: Conceived by the Researchers, May 2021

Table three (3) above shows that the respondents speak nine (9) different languages as seen on the table. It shows that 20 respondents which are (33.3%) speak English, French, and Pidgin English while the larger population 40 which gives (66.7%) speak any of the other languages (Kom, Babanki, Bambili, Bafut, Nkwen, Mankon, Mendankwe or Fulfude).

Table 4: Level of education (for patients and doctors)

<i>Sex and Level of Education: Cross tabulation</i>			Level of Education			Total
			None	Primary/Sec.	Tertiary	
Sex	Male	Count	22	3	5	30
		% within Sex	73.4%	10.0%	16.7%	100.0%
	Female	Count	23	2	5	30
		% within Sex	76.7%	6.7%	16.7%	100.0%
Total		Count	45	5	10	60
		% within Sex	75%	8.3%	16.7%	100.0%
		% of total	75%	8.3%	16.7%	100.0%

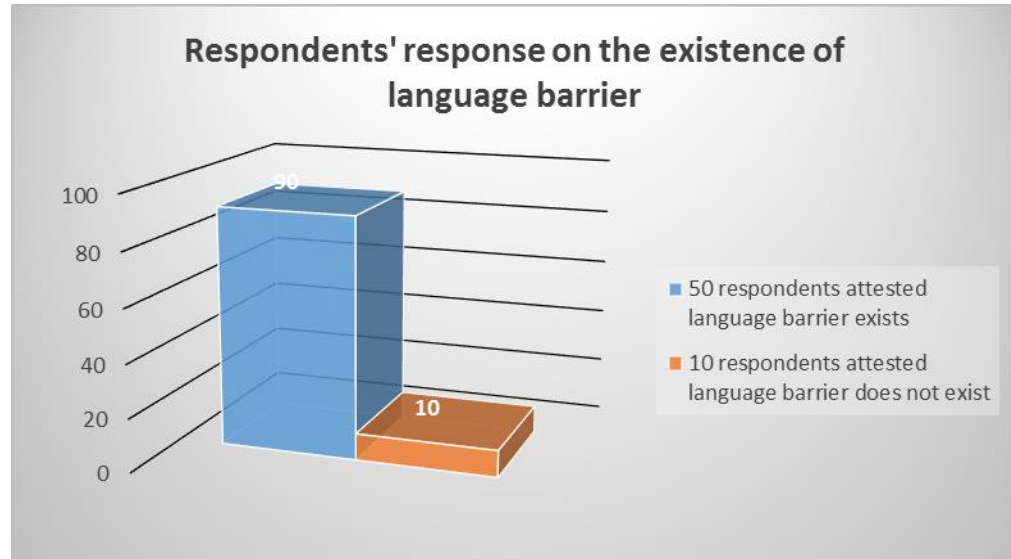
Source: Conceived by researchers, May 2021

Table four (4) above explains the level of education of the participants who responded to the questionnaire. It shows that a total of 45 which is 75% of the respondents are uneducated, five (5) which is 8.3% went through both primary and secondary education, while ten (10) which is 16.7% attained the tertiary level of education. In order to avoid gender bias, a total of 30 males and 30 females were used. Their level of education was intended to determine the language or languages they speak to ascertain the effect of the language barrier on their health challenges. It was discovered that since most of the respondents were less educated or uneducated, the language barrier was, therefore, considered a disability, according to the expansion of the Civil Rights Act of 1964 (Woloshin et al., 1995). The following charts present the results from the interview with the patients.

Discussion of Findings

There exists language barrier between patients and doctors in the hospitals

The interviews from the respondents indicate that there exists a language barrier in the health sector in the country as seen in the 50 respondents (90%) who attested to this assertion. This could be seen from the responses on the chart below.



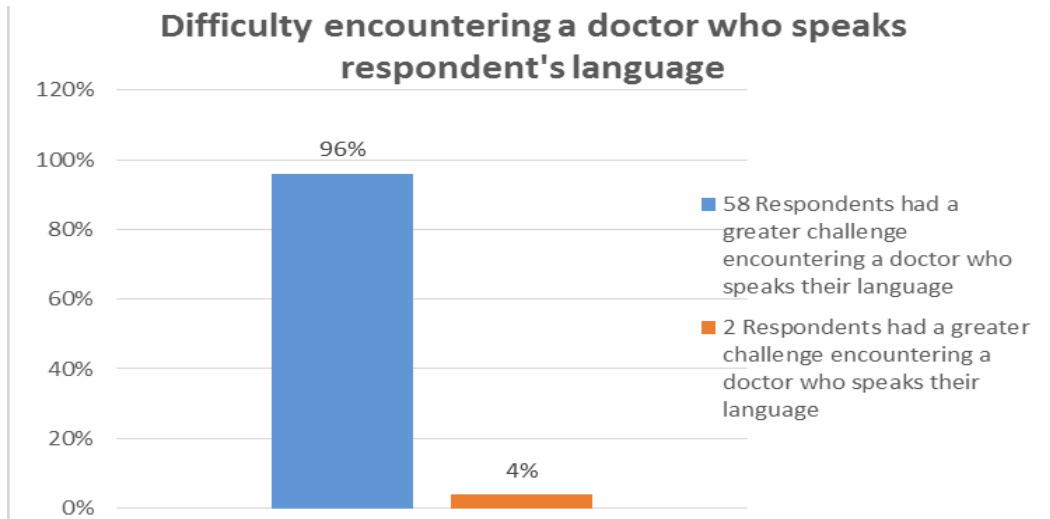
Source: Conceived by researchers, May 2021

Figure 1: Respondents' response on the existence of language barrier in the health sector

This is as a result of the fact that the most common languages spoken by bi(multi)lingual physicians in the North West Region are English (68%), Cameroon Pidgin English (CPE) (32%), and French (9%). Consequently, most of the languages (Kom, Babanki, Bambili, Bambui, Bafut, Nkwen, Mankon, Mendankwe, Moghamo and Fulfulde) spoken by healthcare consumers (patients) are not the languages spoken by most of the physicians in the hospitals.

Uneducated aged patients found it difficult to meet a doctor who speaks their MT

Another result of the study reveals that patients who speak only their indigenous languages under study had a greater challenge coming in contact with a doctor who speaks their language. This is definitely a hindrance to communication and consequently to the medical solutions of the patients. The chart below shows the responses from the patients.

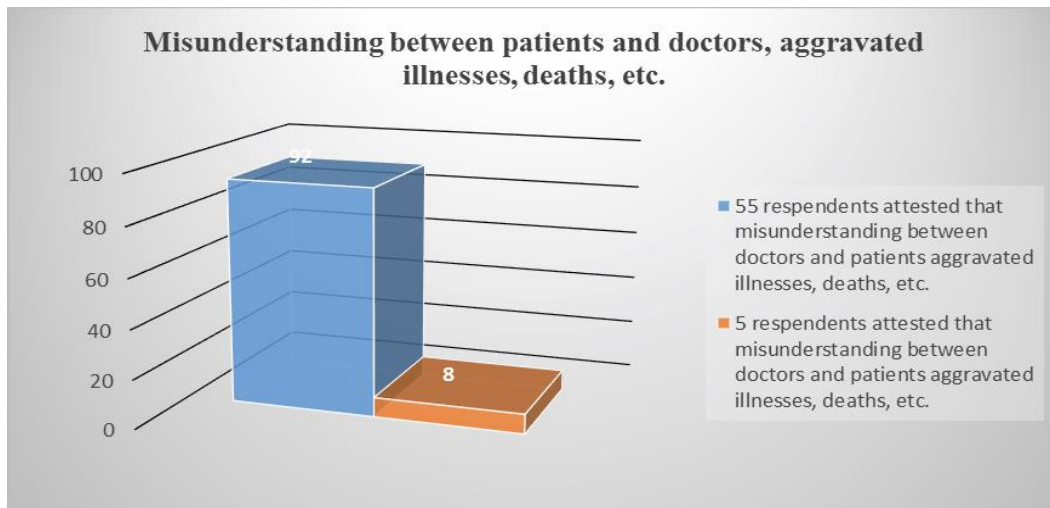


Source: Conceived by researchers, May 2021

Figure 2: Respondents' response on the difficulty meeting a doctor who speaks their language

The misunderstanding/miscommunication between patients and doctors aggravated illnesses and deaths

Thirdly the effectiveness of medical treatment depends on the quality of the patient-doctor relationship. Communication is the means by which the patient's symptoms are elicited, diagnosis is delivered, and treatment is recommended and monitored. The study reveals that due to the use of dissimilar languages, medical communication is impossible and the impact of these misunderstood conversations could lead to misunderstanding/miscommunication between patients and doctors, aggravated illnesses, deaths, or even underdevelopment as a whole.



Source: Conceived by researchers, May 2021

Figure 3: Respondents' response on the effects of the misunderstanding between doctors and patients

Epstein and Street (2007) proposed that a core domain of patient-centered communication is reaching a shared understanding of the patient's problems and treatment in accordance with the patient's values.

Recommendations

Considering the findings of the study, the following recommendations are proposed to curb the misunderstandings caused by language barriers between doctors and patients in our hospitals.

The use of professional interpreter services

When a language barrier is identified between patients and doctors or care providers, provision for various interpreter services is an obvious and frequently proposed solution (Baker, Hayes, & Fortier, 1998; Poss & Beeman, 1999; Tang, 1999; Woloshin, Bickell, Schwartz, Gany, & Welch, 1995; Zimmermann, 1997). Various approaches to interpretation exist, including on-site professional interpreters, ad hoc interpreters (e.g., staff pulled away from other duties to interpret, friends and family members, strangers from the waiting room), and simultaneous remote interpretations using earphones and microphones with off-site professional interpreters (Brach & Fraser, 2000). It is worth noting that the quality of interpretation depends on the adequacy of interpretation, the bilingual ability of staff, and the accuracy and content of a competent medical interpretation (Woloshin et al., 1995). For instance, when patients have to rely on family members for interpretation, the content of medical advice is often not fully understood (Gerrish, 2001) and patients are less satisfied with the health service provided. (Lee, Batal, Maselli, & Kutner, 2002). It should also be noted that translation services may improve access to care, satisfaction with health care, and possibly adherence (Brach & Fraser, 2000).

For instance, a hospital can obtain interpreter services through an outside agency. Such an agency may specialize in medical interpreting or provide a spectrum of interpretation specialties. Alternatively, an organization with another set of services, such as an immigrant social service agency, may market an interpretation service. Use of an outside agency works well when your needs are intermittent and diverse, and your organization can also use an interpreter service to supplement your regular staff of interpreters. Your organization can also employ telephone interpretation services, also known as remote consecutive interpretation; through outside agencies. Often, hospitals use these services for the following situations: Emergencies, when it will take too long to get an interpreter in-person, rare languages in which a local interpreter is not available, simple communications (e.g., setting up appointments or giving lab results). An interpreter should be physically present, however, for more complex communications where nonverbal cues are an important part of the communication and the accuracy of the interpretation is critical.

The hiring of bilingual staff

Most hospitals in our country often use family members and friends of the patient as interpreters, and that can present a series of problems. Such interpreters may lack the appropriate language skills and knowledge of medical terminology. Additionally, such communication compromises confidentiality, censors important information, and jeopardizes family dynamics, especially when children are used to interpreting. The

skills of trained interpreters go beyond the ability to speak a language, especially when technical concepts have no translation in their language. Having health personnel on staff who speaks the same language as his or her patients, especially if he or she is of a similar cultural background, can help our hospitals accomplish the following: save time, eliminate errors in communication and aid proper and effective diagnosis and treatment.

The use of universal healthcare symbols

It is recommended to develop and test universal symbols for health signage that will be more effective at helping all patients navigate around hospitals, regardless of what language they speak. This information can include the following nonverbal cues: maps and signs, overt clues in the architecture and interior design of a facility, and use of color, pattern, and texture.

Use of standardized language assessment tests

Although native speakers are generally proficient in the target language, problems can arise. The dialect may be inappropriate, sociocultural differences may interfere, and medical terminology may be lacking depending on where the provider received medical training. Standardized evaluation tests of a provider's linguistic skills and cultural awareness would help to address this issue, and help hospitalists identify the best person to call for each situation.

Offering interpreter skills training to volunteers

One cost-effective strategy, long popular with hospitals, is to utilize employees who speak other languages as volunteer interpreters when needed. This strategy is particularly useful in emergency situations. However, without a formal evaluation of language skills, this approach can cause problems and, in some cases, even be dangerous. Few employees have received some training in medical interpreting skills, ethics, or vocabulary. A nurse fluent in English but barely speaking his/her native language, may be called upon to interpret for a patient being prepared for surgery. Or a Kom-born nurse with more than ten years of living in Kom and working in a hospital in Bamenda with some knowledge in Kom under her belt may be asked to interpret for a Kom speaking patient in the hospital. In either situation, can we be sure that communication, let alone informed consent, has truly occurred? It is important to note that job conflicts may arise when these voluntary interpreters are called away from their regular duties and asked to fill gaps they were not originally hired for. Job responsibilities may not be met, and the interpreter may feel uncomfortable and ill-prepared for the situation he or she is put in.

Creating a hospital language bank

Formalizing the structure of your language bank will help keep things organized. This can be done by taking the following suggested steps: assign a coordinator to assess the language and interpretation skills of employees, maintain updated lists of bilingual employees, provide interpreter training and assess the quality of service provided. In addition, the hospital should include interpretation as a listed job duty, enlist the support and cooperation of supervisors, and provide compensation for bilingual skills as a bonus or differential.

Written language materials are effective

Researchers found that many hospitals were wasting money on poor translation materials that patients couldn't use because they couldn't understand them. Translation materials should be tailored to the reading level of the audience and adapted and tested for cultural appropriateness. Protocols for translating materials need to be standardized and clearing houses developed to aid in the dissemination of appropriate and effective materials. Translated forms, documents, and health education materials play an increasingly important role in boosting access to service.

Conclusion

Language barriers are the most common communication barriers which cause misunderstanding and misinterpretations between people. Not using the words that other people understand makes the communication ineffective and prevents messages from being conveyed. This study shows that the language barrier clearly exists in the hospitals of the North West Region of Cameroon, and it is more prevalent in certain areas of the region than in others. The study also holds that doctors sometimes encounter language barriers in health care due to the fact that some of their patients do not understand the language they are speaking or they are practicing in an area where they are not native speakers. It also shows that patients achieve better health outcomes when they can communicate with their doctors and caregivers in the same language. We, therefore, hold that understanding imbalances between languages can help address communication challenges across our healthcare system and reduce the number of deaths that exist in hospitals. This is so because people feel secure and dignified when approached in a language they can speak or understand. The study strongly holds that we should therefore encourage the use of our indigenous languages in order to improve social development in our community and the nation at large.

Conclusively, doctor-patient communication is perhaps the most important "non-specific" or palliative effect in the hospital. A better understanding of specific communication processes through language and how they operate in clinical encounters is at least as important to medical treatment as understanding pharmacological processes. Shared understanding between doctor and patient is fundamental because it is a prerequisite for finding agreement with both the nature of the problem and the most appropriate treatment. The more closely patients and doctors can align on these two key aspects, the more likely the patient is to follow treatment recommendations and have a better longer-term treatment outcome.

References

- Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior*. 36(1), 1-10.
- Andersen, R. M., et al. (2001). Changing the U.S. health care system: Key issues in health services, policy, and management. San Francisco: Jossey-Bass.
- Atoh J. C. (2012). Message and meaning: The use of lexical style to determine credibility in Courtroom transactions. *Journal of Studies in Commonwealth (CJSC)*. (Eds.). K. Mpoche and N. C. Balasubrams. Miraclaire Academic Publications (MAP). USA: Kansas City 1(2), 171-195.
- Barnlund D. (2018). Transactional model of communication, in Buinesstopia, <https://www.businessstopia.net/communication/barnlund-transaction-communication>
- Brach, C., & Fraser, I. (2000). Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model. *Medical Care Research and Review*. 57(Suppl 1), 181-217.

- Cross, T.L., et al. (1998). Towards a culturally competent system of care: A monograph on effective services for minority children who are severely emotionally disturbed. Washington, DC: CASSP Technical Assistance Center, Georgetown University Child Development Center.
- David, R. A., & Rhee, M. (1998). The impact of language as a barrier to effective health care in an underserved urban Hispanic community. *Mount Sinai Journal of Medicine*. 65, 393-397.
- Derosé, K. P., & Baker, D. W. (2000). Limited English proficiency and Latinos' use of physician services. *Medical Care Research and Review*. 57(1), 76-91.
- Eberhard, D. M., Gary F. S., & D. Fennig (eds.). (2019). *Ethnologue: Languages of the World*. Twenty-third edition. Dallas, Texas: SIL International. Online version: <http://www.ethnologue.com>.
- Epstein, R., & Street, R. L. (2007). *Patient-centered communication in cancer care: Promoting healing and reducing suffering*. Bethesda, MD: National Cancer Institute, U.S. Department of Health and Human Services, National Institutes of Health.
- Feinberg, E., et al. (2002). Language proficiency and the enrollment of Medicaid-eligible children in publicly funded health insurance programs. *Maternal and Child Health Journal*. 6(1), 5-18.
- Fishman, J. & Garcia, O. (eds.) (2010). *Language and ethnic identity: Disciplinary and regional perspectives*. Oxford: Oxford University Press.
- Gerrish, K. (2001). The nature and effect of communication difficulties arising from interactions between district nurses and South Asian patients and their care givers. *Journal of Advanced Nursing* 33, 566-574.
- Hampers, L. C., et al. (1999). Language barriers and resource utilization in a pediatric emergency department. *Pediatrics*. 103(6 Pt 1), 1253-1256.
- Heilemann, M. V., Lee, K. A., Stinson, J., Koshar, J. H., & Goss, G. (2000). Acculturation and perinatal health outcomes among rural women of Mexican descent. *Research in Nursing and Health*, 23, 118-125.
- Hornberger, J. C., et al. (1996). Eliminating language barriers for non-English-speaking patients. *Medical Care*, 34, 845-856.
- Jacobs, E. A., et al. (2001). Impact of interpreter services on delivery of health care to limited English-proficient patients. *Journal of General Internal Medicine*. 16, 468-474.
- Kravitz, R. L., et al. 2000). Comparing the use of physician time and health care resources among patients speaking English, Spanish, and Russian. *Medical Care*. 38, 728-738.
- Lee, L. J., et al. (2002). Effect of Spanish interpretation method on patient satisfaction in an urban walk-in clinic. *Journal of General Internal Medicine*. 17, 641-645.
- Meredith, L., et al. (2001). Patient-centered communication scoring method report on nine coded interviews [Comment]. *Health Communication*. 13(1), 19-31.
- Morales, L. S., et al. (1999). Are Latinos less satisfied with communication by health care providers? *Journal of General Internal Medicine*, 14, 409-417.
- Poss, J.E., & Beeman, T. (1999). Effective use of interpreters in health care: Guidelines for nurse managers and clinicians. *Seminars for Nurse Managers*. 7, 166-171.
- Tang, S. Y. (1999). Interpreter services in healthcare. Policy recommendations for healthcare agencies. *Journal of Nursing Administration*. 29(6), 23-29.
- Woloshin, S., et al. (1995). Language barriers in medicine in the United States. *Journal of the American Medical Association*. 273, 724-728.
- Woloshin, S., et al. (1997). Is language a barrier to the use of preventive services? *Journal of General Internal Medicine*. 12, 472-477.
- Zimmermann, P. G. (1997). Enhancing your use of interpreters. *Nursing Spectrum (D.C., Baltimore Metro Edition)*. 7(12), 12-22.