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A Sociolinguistic Study of Communication and Language Barriers in Algerian Health Care Settings

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To my dear parents and my sister

Thank you for your unconditional love,
your countless and selfless sacrifices
and your prayers.

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Abstract

In medicine, a satisfactory medical care depends upon effective communication between patients and health providers. Ineffective communication can result in wrong diagnosis and delayed or unsuitable medical treatment. It is assumed that poor communication reduces the healthcare quality and causes anger and a lack of trust among patients.

The main purpose of this study is to examine language use in the Algerian healthcare settings where a multilingual situation is prevailing. It reports on the communication and linguistic barriers that both patients and doctors encounter during medical visits as a result of forces of historical, political, social, educational, and economic origins that are understood to have shaped the actual complex multilingual situation in Algeria, and have, at the same time, created linguistic gaps among members in the Algerian society.

Since the down of modern medicine and other academic disciplines in Algeria, French imposes itself in most scientific fields. Doctors are characterised by using much French and medical jargon which are likely to be unintelligible to laymen. At the same time, health providers are often confronted with different patients from different regions with different backgrounds and who speak different dialects and varieties that physicians or other health provider may not always easily understand. The present research attempts to shed light on the linguistic communication problems caused by language disparities and gaps between doctors and patients.

The research inquiry adopts an ethnographic paradigm to examine a sample population in some private offices and the university hospital of Sidi Bel Abbes, an important commercial centre in the Northwest of Algeria. It uses a set of research tools; questionnaires, interviews, observation, and takes advantage of the new technological instruments such as emails, social networking services and the bioinformatics tools to show that; in addition to the social and educational differences, there exist linguistic barriers to doctor-patient communication due to differences in French proficiency between physicians and patients as well as the use of medical jargon by doctors and the use an ambiguous language by patients as a result of Algeria's linguistic diversity. We hypothesise that these linguistic hurdles have a negative impact on the effectiveness of communication in the Algerian heathcare settings. They create misunderstandings and confusion and make both doctors and patients less informative during the medical encounters.

Key words: Communication – Linguistic Barriers - Multilingualism - Language differences – Healthcare settings.

List of acronyms

D-P communication: Doctor-Patient communication.

CS : Code-switching.

LEP : Limited English Proficiency.

US : United States.

AA: Algerian Arabic.

MSA: Modern Standard Arabic.

CA: Conversational Analysis.

L: Low Variety.

H: High Variety.

LAD: Language Acquisition Device.

CLA: Communicative Language Ability.

LEP: Limited English Proficiency.

US: United States.

CHU: Centre Hospitalier Universitaire.

SBA: Sidi Bel Abbes.

L1: First Language.

L2: Second Language.

****: Unclear speech.

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General introduction

General introduction

In healthcare settings, in spite of the technological development and the use of modern medical devices to help diagnose and treat diseases, doctors and patients still depend on each other to identify and treat illnesses. The interpersonal communication remains indispensable to get their messages across. However, if they do not use the same language, the clinical outcomes may not always be satisfactory. Either the patient will be unable to effectively communicate his or her pain, fear and concerns, or it is the doctor who will meet difficulties to understand the patient, to clearly explain the nature of the diagnosed disease and its causes, and to provide the patient with the necessary recommendations about the treatment.

Language is by all means the most primary ingredient of the process of interpersonal communication. Accordingly, it is the fundamental of all tools upon which both doctors and patients rely to make sense of the medical encounter and to exchange information. This explains why there is an increasing orientation of a large number of researches in social sciences and other disciplines towards communication and language use in doctor-patient relationship and their effect on the medical outcomes. They are getting more aware about its importance as it is widely accepted that any health service process requires linguistic interaction between a service provider and a service seeker. So, the use of foreign and intricate language would cause breakdowns in communication which would lead to great deficiencies in terms of health services, trust and satisfaction. Through language, doctors and patients express their thoughts and concerns to get full knowledge about the patient's condition and disease history. In other words, language is used to get information about social backgrounds, medical and surgical antecedent history. This allows the doctor to identify the problem, to make an accurate diagnosis and to involve the patient by discussing the medical treatment to take decisions. Thus, if linguistic problems occur during the encoding and decoding stages of the communication process, the message transmission will be affected and the intended meaning will be altered. This would

eventually lead to dissatisfaction as it can weaken trust or it can even be a causative factor of medical errors in some cases.

Indeed, it is very important to realise that in a context of a crucial importance such as healthcare, the use of intelligible language with a good choice of words increases access to intelligible information. In multilingual contexts, it is likely that language disparities impact communication between doctors and patients. On the other hand, offering an appropriate translation is not an easy task but it is considered vital to the success of the medical interview. Among the linguistic hurdles that may affect the quality of health services, illiteracy, lack of proficiency in languages used by doctors and patients as well as the use of a highly technical language are the most critical.

In Algeria, a patient with little or no proficiency in French and limited health literacy might receive a poorer quality of healthcare services, because physicians in Algeria are taught and trained exclusively in French which is the language of instruction of most scientific disciplines. As a result, doctors and medical students become deeply influenced by French and the medical jargon in their linguistic behaviour. They are likely to meet difficulties to use an intelligible language free of French and jargon when dealing with patients with low educational and social backgrounds. Hence, patients may not understand their doctors and follow their instruction. They may all the same confuse doctors if they misuse French or jargon. Besides, we know that the large urban cities of Algeria often attract people of different linguistic and socio-cultural backgrounds from the rural areas and far towns to receive better health services. Doctors and patients may use some words and expression from local Algerian varieties that are sometimes mutually unintelligible and result in situations of full confusion.

Actually, in this study we want to examine communication problems that are induced by the coexistence of several language varieties in Algeria. Focus will be mainly put on the relevant issue that while there is an overall bilingualism among

doctors due to historical and educational motivations, patients are not all bilinguals because of social, political, cultural, and regional factors.

Moreover, the medical context requires doctors to use a specific register that is characterised by the use of French and medical jargon. It is not evident to immediately find equivalents of highly medical technical terms in the local non-standard varieties. The extent to which doctors are able to accommodate to their patients by using, reducing or avoiding completely French and jargon, during their interactions with patients, will be part of this research.

In order to specify the discussed topic issue we would like to formulate the research problem of this investigation as follows:

- What languages do doctors and patients use during the medical examination?
- What is the effect of language differences on communication between physicians and patients?
- Do French and the medical jargon contribute to a poor communication between doctors and patients?

These questions allow us to formulate the following hypotheses

- Algerian Arabic, the mother tongue of the majority of Algerians is the most used language variety, during medical encounter, but French cannot be avoided and it is also much used.
- The actual situation of unbalanced societal bilingualism and the complex linguistic diversity prevailing in Algeria is creating linguistic barriers that affect communication in healthcare settings.
- French and medical terminology are two key factors contributing to poor communication between doctors and patients.

The primarily purpose of this study is to identify the linguistic communication problems. To this end, other objectives are put forward. First, we examine the sociolinguistic characteristics and backgrounds of patients and doctors then we attempt to identify patterns of language use in healthcare settings. The second objective is to identify the linguistic barriers that cause misunderstanding and misinterpretation during medical examination. A final objective is to test patients' satisfaction with doctor-patient communication.

To this end, the present research is structured in three chapters, each of which corresponds to a specific purpose as follows:

The first chapter is theoretical starting an outline of notions and concepts in relation to the study. Then, it offers an overview of the pervious literature of researches on language in doctor-patient communication and factors of misunderstandings. The second chapter is devoted to the circumstances under which a complex multilingual situation is shaped. It sheds light on the existing linguistic break, between members of the Algerian community, caused by unequal distribution of language varieties. We develop, then, in the third and last chapter the methodological aspects of this research framework. It deals with the fieldwork that we carried out in public and private medical sectors. It considers the multiple means used in collecting and analysing data to extract evidences and test our hypotheses. We examine and compare aspects of language use between doctors and patients thoroughly via questionnaires, interviews and observations in real situations of medical practices. A statistical test and other secondary instruments are also used to maintain a cross-examination of communication at healthcare settings.

Chapter one : Approaches to Communication in Health Care Settings

1.1. Introduction

Communication is more than important. It is vital in all aspects of human life to the extent that without it life would be quasi-impossible. The current chapter presents an overview of the literature on the previous researches to doctor-patient communication (D-P communication henceforth). It is devoted to define notions and concepts in relation to the study of communication and D-P communication. It, also, attempts to sketch out the possible factors of misunderstandings and barriers that impede communication.

1.2. The communication process

The term 'communication' comes from the Latin word *communicare* meaning 'to share' or 'to make common' and it is etymologically related to both 'communion' and 'community'. DeVito (1986: 61) notes in his writing that communication is 'the process or act of transmitting a message from a sender to a receiver, through a channel and with the interference of noise'**.** Other scholars give other detailed definitions, expanding that the message transmission is a deliberate act to convey meaning. Canale (1983:04) provides a definition of communication as 'the exchange and negotiation of information between at least two individuals through the use of verbal and non-verbal symbols, oral and written/visual modes, and production and comprehension processes'. In other words, Communication refers simply to the transmission of a message from a sender to a receiver in an understandable manner.

However, it is worth mentioning that communication is always referred to as a process which guides individuals who are involved in the communication activity. It is a dynamic and a continuous activity which is always changing and always in motion (DeVito, 1986: 239). Communication is said to be taking place when the sender and receiver are sharing meanings. Effective communication leads to understanding, consequently, a person that follows the communication process will be more successful and productive in any professional situation.

Effective communication has a great importance in both professional and social life. From a professional point of view, effective communication is absolutely crucial in any kind of profession, i.e., effective communication is very important for successful interactions with people of different backgrounds.

There are many types of communication, but to delimit the scope of our study we shed light only on interpersonal communication and linguistic communication.

1.2.1. Interpersonal communication

Interpersonal communication has to do with relationships between people. It usually happens in face-to-face interaction and any relationship is primary created, maintained, or changed through interpersonal communication. Roloff (1981: 30) states that 'Interpersonal communication is a symbolic process by which two people bound together in a relationship provide each other with resources or negotiate the exchange of resources.'

Put simply, interpersonal communication can be defined as any verbal or non-verbal message transmission between two people or more. Scholars on the other hand define it by distinguishing it from other types of communication with regard to some criteria, in particular the following:

- the number of participants is usually small;
- the participants are usually in close physical proximity to one another;
- the use of sensory channels,
- the participants are usually able to provide immediate feedback.

1.2.2. Verbal communication or linguistic communication

Verbal communication is a specific ability to human kinds. It is based on the use of speech sounds, words, utterances, (and letters in written discourse), etc., i.e., the use of either spoken or written natural language. Hence, written communication messages are conveyed through written forms such as letters, texts, bills, reports, etc.,

while, oral communication basically relies on the use of speech and hearing organs that people are equipped with and which are responsible for the production and perception of language. Messages may be in different forms of speech in conferences, appointments, group discussions, telephone conversation, etc., It represents the most usual mode of linguistic communication for human beings.

Communication has always been examined theoretically by using models. These models help understand the nature of the process of communication and its elements.

1.2.3. Models of communication

1.2.3.1. De Saussure's Model of communication 1983 (speech circuit)

Saussure invents a circular model of communication based on two tenets: the first tenet sets forth that communication is a linear process in which two persons interact in a manner that a message is transmitted from one to another; the second tenet alleges that during the communication process, both participants are simultaneously active, i.e., communication is an active process in which the participants can at the same time listen and answer or at least react in some way.

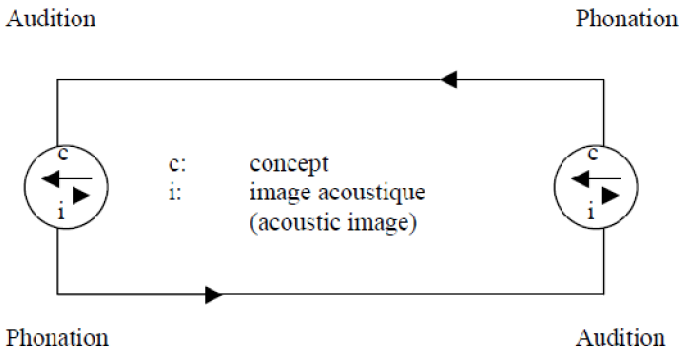

Figure 1.1. [1]: Saussure's Model of the Speech Circuit

Accordingly, De Saussure's communication mechanisms proceed as follows: two processes are sketched, the first one that he calls 'phonation' in which the sender

[1] Jürgen Beneke (2001: 01) source: http://www.uni-hildesheim.de/~beneke/WS01-02/meth/abstracts/3_1_Communication.pdf Accessed on 10/10/2011

formulates a concept, i.e., a mental sign in his/her mind then shapes an acoustic image to this concept. The second process, 'audition', refers to the opposite process in which the receiver converts the acoustic message into a concept or a mental sign.

1.2.3.2. Shannon-Weaver communication model

In 1949, the American engineer Claude Elwood Shannon elaborates a communication model in his work, co-authored with Warren Weaver, a Mathematical Theory of Communication in which he defines communication process in terms of certain elements such as a sender, a receiver, a channel, the input and the output both referring to the message, and noise which refers to any external factor that can affect the communication process. The sender, then, sends the input, i.e., the intended message through a channel to the receiver. Successively, the receiver turns out the received message to an output. However, Shannon and Weaver claim that usually the channel is affected by some external factors, which in turn has some effect on the intended messages.

In this model, Shannon and Weaver have devised a new component in the communication process 'noise', a physical factor that disrupts the information transmission in telephone communication. Although this model was highly influential and has inspired most of the following communication theories in different disciplines like mathematics, psychology, sociology, linguistics, etc., it has all the same its shortcomings; for instance, it neglects the psychological and sociological dimensions of interpersonal communication. Moreover, it does not take into account the retro-action of the receiver who is represented as passive. The model is then left to telecommunication engineering to which it was initially conceived.

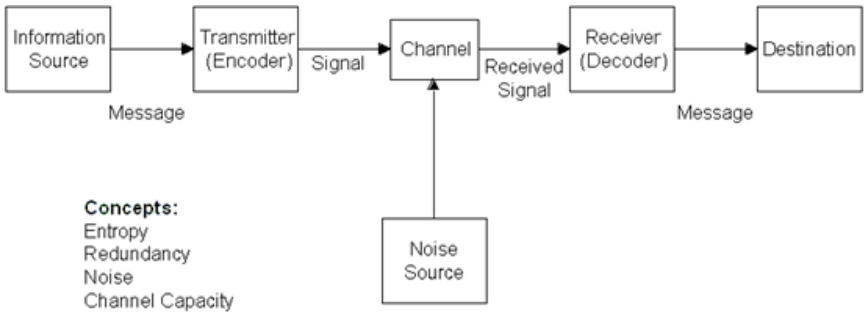

Figure 1.2.[2]: Shannon and Weaver's information theory model of communication

1.2.3.3. Mole's communication model

The American linguist Mole attempted to design, during the 1960's, a model for the communication process which builds on Shannon's and Weaver's theory of communication. He brought in 'code' as an essential element for a successful communication between a sender and a receiver. In addition, Mole believes that the sender and receiver must share a primary set of codes. No matter whether or not they share the same language, they have to depend upon the words they know in order to get the message across.

1.2.3.4. Jakobson's Model of Communicative Functions

The linguist and communication theorist Roman Jokobson extends other linguist's models and allocates a communicative function to each element of his communication model. He names six communicative functions which show how language operates for specific purposes.

a) **The emotive/expressive function** reflects the speaker's emotional attitude towards the content of the message.

[2]Source: http://www.shkaminski.com/Classes/Handouts/Communication%20Models.htm accesed 10/09/2010

b) **The conative function** focuses on the receiver. It reflects what the sender expects the receiver to do as a consequence of receiving the message.

c) **The referential function** refers to the context, and stresses that any communication is contextual, i.e., it cannot happen in isolation from context.

d) **The phatic function** through which contact is established between two persons. It refers to the channel of communication.

e) **The metalinguistic function** is associated with the 'code'. This function is necessary to check whether the message is understood and aims at providing clarification and correction when needed.

f) **The poetic function** has to do with the message, i.e., stress is on the form of the message and the creative use of language by means of rhetorical figures and prosody.

1.3. Language and communication

People have long been curious about language and its multi-level nature. In general linguistics, under the influence of Noam Chomsky, language is mainly studied as a formal system. It is explained with respect to a 'highly abstracted individual competence' (Tonkin, 2003: 1); however, this approach does not answer questions about language use in a broader social context. When speakers are communicating, they need more than grammatical rules of the language as a formal system. To the same degree, speakers need knowledge of the social context of the person they address, of the topic, etc., that is, they need what later on Hymes (1972) calls 'communicative competence'; otherwise, language can hardly be effective and functional in communication. A new interest, among scholar dealing with liberal arts such as philosophy, sociology, psychology, pedagogy, linguistics, neurolinguistics, etc., has emerged. Language is then analysed in terms of individual competence, interactions and discourses among groups of individuals, as formal or informal system of signs and in other various ways.

One of the most outstanding statements is given by Halliday (1973) who defines language concept as an instrument of social interaction with a clear communicative purpose. To put it simply, Halliday treats language as a means of a purposeful social

activity. He identifies seven functions of language, in human communication. The First four functions, that he calls 'instrumental', 'regulatory', 'interactional' and 'personal', help the individuals to meet their physical, emotional, and social needs, whereas the three remaining functions; 'heuristic', 'imaginative' and 'representational', help individuals make some representations of the milieu in which they live. Several other definitions of the concept of language, that see language as a fundamental social means of communication, have been developed. David crystal for instance treats language as an expressive system of formal rules that enables individuals in a society to communicate with one another, he points out that language is 'the systematic conventional use of sounds, signs, or written symbols in a human society for communication and self-expression' (Crystal, 1992: 212).

Indeed, language is depicted as a social phenomenon that cannot be studied in isolation from context or be divorced from the study of society and its developments. Language variation is manifested in relation to variation in the social systems. It is so far accepted in the literature that using a language appropriately requires knowing that language and how to use it in its social environment. In other words, a kind of 'communicative competence' is required.

1.3.1. Communicative competence

The notion of *communicative competence* was first proposed by Hymes in a 1966 paper which was later revised and published in 1972. Other linguists, such as Habermas (1970) and Campbell and Wales (1970), have also used this term, but Hymes' was the first one to elaborate the concept in a manner that made of it the most influential of all. Hymes' communicative competence is regarded as a challenge to Chomsky's notion of the term *competence* (1965). Chomsky holds that:

> Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-communication, who know its (the speech community's) language perfectly and is

> unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of this language in actual performance. (Chomsky, 1965: 3)

In order to delimit the area that linguists are concerned within their language studies, Chomsky distinguished between *competence* (the speaker's knowledge of his or her language) and *performance* (the actual use of language in concrete situations) and emphasized that linguists are only concerned with the former, but not the latter. In his definition, linguistic competence refers to the perfect knowledge of language structure, the knowledge acquired by the ideal speaker in a homogeneous speech community.

Hymes claims that Chomsky's concept is problematic and misses out some crucial information. In his perspective, 'competence' seems to be incomplete and inadequate to be considered in isolation from other components of language use, i.e., the social factors that influence language acquisition and use, because according to Chomsky it should include only the grammatical aspects of language and require homogeneous linguistic competence within the individual and the speech community. Hymes believes that the notion of competence needs to be extended to comprise the 'rules of use' and the 'rules of grammar', i.e., 'competence should also describe the knowledge and ability of individuals to appropriately use language in the communicative events in which they find themselves in any particular speech community'(Li-sheng, 2000 :476)[3]. Therefore, a linguist's task is not only to study and describe what a speaker knows about the grammar but to take into account what he or she knows about the appropriate use of the language. In a word, Hymes's notion of competence stresses the importance of including the sociocultural dimension in any attempt to study language.

[3] Source: https://springerlink3.metapress.com/content/j7r7mk0247227t00/resource-secured/?target=fulltext.pdf&sid=0ve402aaevacem5jdybx53bh&sh=www.springerlink.com (Accessed on 20/09/2010)

In Hymes' model of communicative competence, there are four parts or sectors that characterize the individual's underlying knowledge and ability to use language:

a) **Systematic potential**

What is possible according to the individual's knowledge of the linguistic system in the speech community;

b) **Feasibility**

What is feasible in the psycholinguistic capacity of the individual, e.g. the individual's memory and perception;

c) **Appropriacy**

What is appropriate in relation to the context of the communicative event;

d) **Occurrence**

What actually occurs or does not occur in language use.

(Harmer, 1983: 13-14)

In fact, Hymes has paved the way to many linguists for studying language in use; there has appeared a large body of literature on communicative competence, since then. Many aspects of communicative competence are further examined and new models are also suggested.

Later in a quite similar vein, Canale and Swain (1980), propose a new conception of communicative competence which they have attempted to describe by generating a modular framework consisting of three and later (Canale, 1983) four units:

a) **Grammatical competence** is viewed to include 'knowledge of lexical items and of rules of morphology, syntax, sentence-grammar semantics, and phonology' (Canale & Swain, 1980: 29). Accordingly, Canale and Swain give back a value to the rule of grammar. They maintain that without the rules of language grammar the rules of use would be useless.

b) **Sociolinguistic competence** consists of two sets of rules 'sociocultural rules of use' and 'rules of discourse' Canale and Swain believe that knowledge of these rules

is very important to understand the speaker's intended social meaning of his/her utterances, depending on contextual factors such as status of participants, purposes of interaction, and norms or conventions of interaction. They emphasize that they are, foremost, required to differentiate between the literal and the intentional meaning when there is a transparency between the two to avoid confusion (*ibid*: 30).

c) **Discourse competence** was later added by Canale (1983) to refer to the rules governing the cohesion and coherence of utterances and sentences, i.e., the ability to make stretches of discourse by forming meaningful utterances and combing sentences.

e) Strategic competence is the 'compensatory' efforts that help enhance communication effectiveness. It refers to the verbal and non-verbal communication strategies that the participants need to call for when there are breakdowns in communication, as a result of 'performance variable' in actual situations or because of insufficient competence in the previous communicative competencies.

Canale and Swain's conception of communicative competence varies considerably form that of Hymes in some features. Unlike Hymes, they give back importance to the grammatical dimension of language stating that: 'Just as Hymes was able to say that there are rules of grammar that would be useless without rules of language use, so we feel that there are rules of language use that would be useless without rules of grammar.' (*ibid*: 5). But the major difference between their framework and Hyme's concept, and perhaps the most functional contribution to communicative competence theory, is that they were pioneer in integrating the communication strategies that interlocutors often use to deal with the problems that may arise to hamper the flow of communication. They believe that strategic competence forms a crucial aspect of communicative competence; in other words, they consider it to be as important as grammatical and sociolinguistic competence, and should be treated accordingly.

Bachman (1990) further developed the theoretical frameworks of Hymes (1972) and Canale and Swain (1980). He suggests his Communicative Language ability (CLA) model which includes three basic components:

a) **Language competence** encompasses 'asset of specific knowledge components that are utilized in communication via language' (Bachman, 1990: 84).

b) **Strategic competence** refers to 'the mental capacity for implementing the components of language competence in contextualized communicative language use.' (ibid) Bachman explains that strategic competence does not come into play only when some communication problems arise, as Hymes states it. He extends its role in communication to work as a means which enables the speaker to relate knowledge of the language (that assesses the grammatical use of linguistic forms) to the context of situation (where language use is occurring) and to the sociocultural knowledge (that takes into account culture, age, sex, social-class, occupation, etc.).

c) **Psychophysiological mechanisms** are defined as 'the neurological and psychological processes involved in the actual execution of language as a physical phenomenon' (*ibid*), i.e., the sensory and intentional channels through which language processes.

During the 1970's and 1980's, research on communicative competence reached its zenith, owing to the valuable contribution of applied linguists who were mainly interested in the theory of language acquisition (e.g. Hymes, 1972 ; Savignon, 1972 ; Canale and swain, 1980 ; Canale, 1983 ; Widdowson, 1983 ; Bachman, 1990 ; etc.). However, in the current research, those whose work lies beyond the scope of our study are not mentioned.

1.3.2. Pragmatic competence

In fact, in Bachman's model of CLA, another important component of communicative is introduced. He divides language competence into two sub-components; 'organisational competence' and 'pragmatic competence'. The former refers to knowledge of linguistic units and the rules of combining them to form words,

sentences and utterances. 'Pragmatic competence' comprises knowledge of sociolinguistic rules of appropriateness such as sensitivity to differences in varieties, dialects, registers, etc. (Peterwagner, 2005:16)

In this sense, Thomas (1983) defines pragmatic competence as the ability to use language effectively to reach a specific communicative goal by involving knowledge beyond the level of grammar (Grossi, 2009: 53). Consequently, pragmatic competence is becoming an integral part of teaching and learning languages as there is an increasing awareness that "the way speech acts are realised varies across languages".

Accordingly, the lack of pragmatic competence in one language or another can affect the interpretation of messages by distorting their meanings which leads to misunderstandings or more significantly to complete breakdowns in communication, what Thomas called 'pragmatic failure' that " might carry serious social implications" as stated by Blum-Kulka and Olhstain (1986:169).

1.3.2.1. Pragmatic failure

The concept of pragmatic failure was coined by Thomas (1983: 91) to refer to "the inability to understand what is meant by what is said". In other words, it refers to the inability to understand the speaker's communicative intentions. However, this does not occur as a result of grammatical mistakes in words and sentences formation, but when one violates the social and the interpersonal relationship norms by using, for example, an unsuitable style, an inappropriate expression, etc.

1.4. Language variation

Recent years have witnessed an increasing interest in 'language variation'. It has become one of the fertile grounds for research in sociolinguistics. It is by definition evident that all languages show variation which is 'the rule rather than the exception' (Jorgensen *et al.*, 1995: 153). As Sapir (1921: 147) puts it, 'everyone knows that language is variable'. Thus, as its name implies, 'language variation' is

concerned with how language changes with respect to different contextual factors like social-class, geography, gender, age, education, etc. The same speaker may use different linguistic varieties according to the situation in which he/she finds him/herself and for different purposes. Besides, language variation allows us to identify the background of individuals, the groups and communities they belong to.

Sociolinguists started using the terms 'linguistic variety' as a cover term for language, dialect, register, style and so forth because these appeared to hold some emotions and could not be taken for granted. From a linguistic standpoint, no one variety is better than another. Hudson (1996: 22) defines a linguistic variety as 'a set of linguistic items with similar social distribution', i.e., a set of linguistic items that are used by an individual, or shared and used by a group of individuals or members of a speech community. Wardhaugh (2006: 25) thinks that linguistic varieties exist as a result of their association with some external social factors such as geographical area and social group. Nonetheless, it should be stressed that when one adopts this term, i.e., linguistic variety, it is unnecessary to compare it to a full-fledged language with a developed vocabulary and grammar, for example a slang or a jargon may also be called linguistic varieties although they are not as developed as other larger linguistic varieties such as the English or Arabic languages that consist of a larger body of vocabulary and a developed grammar. A linguistic variety may simply include some linguistic items as it is indicated in Fishman's definition of 'slang': 'a quite restricted set of new words and new meanings of older words, mixed with linguistic items with a much larger social distribution' (Fishman, 1991: 147) or it may be larger than a single language as he claims it in the case of a multilingual speaker or a community where 'a variety may be much larger than a lay 'language', including a number of different languages' (*ibid*: 23).

In everyday conversations people use their local regional varieties such as dialects and accents to communicate, whereas in professional settings specific varieties

are used like jargon and register. In what follows highlight will be on the linguistic varieties that we suppose are source of some troubles in health care communication.

1.4.1. Regional variety

An essential feature of natural languages is that they change over time and vary from one region to another and from one social group to another. A 'regional variety' may be defined as 'a variety of language which differs grammatically, phonologically and lexically from other varieties, and which is associated with a particular area […]' (Trudgill, 1992: 23), in other words, one can notice that a language is used with some differences in vocabulary, grammar and pronunciation as he or she moves from one area to another. Trudgill views a regional variety as a sub-variety of a language, i.e., a larger variety, which he considers as consisting of a set of regional and social varieties. The positive and negative connotations associated with these linguistic varieties are outside the scope of our research.

1.4.2. Register

Broadly speaking, language is vital in the daily lives of members in all societies. These members have certainly diverse backgrounds, interests and activities, hence, they need to vary their language to fit each occasion, for example, a formal lecture of science, physics or mathematics is not delivered in the same way in which people speak in their everyday conversation. According to Lewandowski (2010: 66) 'the forerunner of the concept of register was the restricted language – a term coined by J. R. Firth, who defined it as a variety 'serving a circumscribed field of experience or action', which 'can be said to have its own grammar and dictionary' (Firth 1957: 87-98)'.

In sociolinguistics the term 'register' is discussed to refer to the case of language variation according to the context of use and not to its users, i.e., the same speaker may employ different linguistic varieties in different contexts for different ends. For instance, it is possible for a physician to use at least two varieties: a dialect at

home with the members of his family or a shopkeeper and register in formal contexts or when talking to other physicians. Halliday contrasts the two concepts of register and dialect this way 'a register is a variety defined by reference to the social context – it is a function of what you are doing at the time' while 'a dialect is a variety of a language that is defined by reference to the speaker: the dialect you speak is a function of who you are' (Halliday 1978: 157). In addition, register seems to be multidimensional.

According to Halliday, it can be affected by the following three variables:

a) **Tenor**: Variation is conditioned by the social relationship between the participants in the communication act (here register is regarded as a marker of formality).

b) **Mode**: This refers to the medium of communication. It can be either oral or written.

c) **The field:** Variation is determined by the activity of speakers and the subject matter which call for a particular set of vocabulary. This kind of speech is often referred to as 'jargon'.

1.4.3. Jargon

Some words, terms and expressions have specific meaning. They are defined in relation to a particular field of interest, occupation or a topic such as sport, medicine, computing, etc. and referred to as 'jargon'. For example, words like code-switching, bilingualism, sociolect, vernacular are part of the sociolinguistic jargon. Hornby (1995: 637) describes jargon as the specific technical vocabulary employed by certain groups in a limited way. This means that it is not used or shared by non-group members. Jargon consists of uncommon and ambiguous technical terminology; therefore, it is difficult for a lay man to understand it and it may all the same stand as a barrier to communication with the lay public. Nevertheless, its use may not be intended to exclude non-group members, 'Jargon makes communication more effective for in-group members' supports Van Herk (2012: 110). In this respect, it helps users to express themselves easily and rapidly without spending much time interpreting and explaining their meanings. To illustrate, a pediatrician may say directly to a parent that his child is suffering from 'pertussis' (what is referred to as 'la

coqueluche' in French) without mentioning or explaining that it is a highly contagious bacterial disease caused by Bordetella pertussis.[4]

1.5. Language choice

It may be thought that language use is not rule-guided; however, in whatever context, speaking requires first a decision to be made by the speaker about which linguistic variety should he or she select from the linguistic varieties available in his or her linguist repertoire to communicate appropriately his or her thoughts .

1.5.1. Linguistic repertoire

Members of whatever society possess various linguistic varieties, codes and ways of speaking that form what Gumperz (1977) calls 'the communicative repertoire' of a speech community and defines as 'all varieties, dialects or styles used in a particular socially-defined population, and the constraints which govern the choice among them.' (*in* Saville-Troike, 2003 : 40).

To communicate, individuals choose one or more of the available codes and sometimes switch from one code to another under some personal or contextual constraints. This linguistic phenomenon of moving from one variety to another remains highly debated in sociolinguistic research.

1.5.2. Code switching

Weinreich (1963: 73) suggests that 'the ideal bilingual switches from one language to the other according to appropriate changes in the speech situation (interlocutors, topics, etc.), but […], […] within a single sentence' with faith to the structuralism's integrity of each language.

Indeed, later on, a number of researchers suggest that there exist grammatical, social and psychological rules that govern switches between codes within sentences.

[4]Source: http://en.wikipedia.org/wiki/Pertussis (Accessed on 30/09/2011).

This research is not concerned with the grammatical constraints of code switching (henceforth CS), hence, in what follows a discussion of only sociolinguistic and psycholinguistic dimensions of CS will be made.

1.5.2.1. Sociolinguistic dimension of CS

One of the in depth pioneering investigations in the function of social factors in CS is that of Blom and Gumpez (1972) who suggest that code choices are 'patterned and predictable on the basis of certain features of the local social system.' [(Blom and Gumpez, 1972: 409) in. Devic, 2007: 10] They introduce two distinct types of CS , 'metaphorical CS', in which speakers switch from one language to another according to changes of topics under discussion , and 'situational CS' where the code changes as a result of changes in the situation , (the status of interlocutors, the setting of de conversation or the topic of conversation).

Later on, Gumperz(1982:60) associates situational switching in which 'speaker's choice of language is constrained by factors external to her/his own motivation.' (Mey, 2009: 68) to 'diglossia' a situation prevailing in some speech communities that have two distinct codes which manifest a clear functional separation and specialization; that is, one code is used in one set of circumstances and another in a different one - (Fishman 1972) - and contrasts it with metaphorical CS which he expanded and modified in terms of 'conversational code switching' (1982: 60).

Likewise, Heller (1988: 05) points out that situational CS is 'rooted in a social separation of activities (and associated role relationships), each of which is conventionally linked to the use of one of the languages or varieties in the community linguistic repertoire'. Yet, Gumperz made a distinction between 'we' and 'they' codes. The 'we code' is usually associated with home, family, peers (in group) and reflects values of solidarity and closeness, while the 'they code' is associated with outsiders (out-group) and reflects power and authority.

In conversational CS Gumperz explains that the relationship between language usage and social context is more complex. According to him, speakers may codeswitch to create a metaphoric effect to communicate 'information about how they intend their words to be understood'(1982: 61). He proposes six discourse functions for conversational CS: qualification, and personification, interjection, reiteration, message qualification, and personification vs. objectification (cf. Gumperz 1982:75-84). In spite of the overlap and lack of clarity in the definitions of metaphorical and situational CS, Gumperz's investigation and views have influenced many studies such as Myers-scotton's (1993), Auer's (1998).

1.5.2.1.1. The markedness model

The markedness model proposed by Myer-Scotton (1991, 1993, 1999) can be used to examine the social meanings of CS. Code choice is deemed to be a way of communicating the desired group membership and interpersonal relationship. According to this model, a speaker's choice of a code indexes 'negotiation principles' which implies that he or she selects the form of his or her utterances depending on a rights-and-obligations set. Myer-Scotton (1993b: 478) expounds on her view as follows:

> Humans are innately predisposed to exploit code choice as negotiation of 'position'. That is speakers use their linguistic choices as tools to index for other their perceptions of self, and of rights and obligations holding between self and others

Therefore, speakers will alternate or mix codes when they wish to convey certain meanings, a specific social identity or group membership. Myers–Scotton puts on examples of CS in terms of two categories unmarked vs. marked choices: the first category is employed by a speaker to mean that their linguistic choice is expected by the addressee, whereas the use of the second category is unusual and unexpected, therefore, a marked code choice is meaningful only to members of a specific group (or speech community) in a specific speech event.

Other CS researchers, such as Auer, view Myers- Scotton's Markedness model too simplistic because it accounts for fixed sets of social information (such as topic, setting and participants.). Auer suggests viewing CS from another angle, in which speakers' linguistic choices are not influenced by those contextual features. He investigates CS by adopting Gumperz interactional perspective and makes use of the conversational analysis (CA) dimension. He introduced his sequential approach which interprets CS meaning in relation to its position in the conversation 'any theory of conversational code-alternation[5] is bound to fall if it does not take into account that the meaning of code-alternation depends in essential ways on its 'sequential environment'.' (Auer, 1995:116)[6] To put it simply, Auer's sequential theory interprets CS meaning with regard to the preceding and following utterances. He also claims that the social meaning of code switching is constituted locally, it is 'sufficiently autonomous' from grammar and the societal (i.e., macro-sociolinguistic) level (Auer, 1998:04)[7]. In addition to these systematic approaches, there is another psycholinguistic approach to CS that is carried out by Michael Clyne, though, it has not yet received much consideration.

1.5.2.2. Psycholinguistic Dimension of CS

According to Clyne (1991), there are lexical items, which he calls 'trigger words' that stimulate psycholinguistically-conditioned CS. Clyne (1991:193) define these trigger words as 'words at the intersection of two language systems, which, consequently, may cause speakers to lose their linguistic bearings and continue the sentence in the other language'. He believes that these trigger words are similar in, and belong to, both languages of bilingual speakers or bilingual speech communities. Unlike the sociolinguistic and the structural aspects of CS, Clyne (2003) considers the 'trigger words' as the cause of the CS phenomenon, due to the trigger impact they make on language use in a particular conversation, as they evoke and call for other items of the other language of the bilingual speaker. Besides, Clyne stresses that

[5] Auer uses the term 'code-alternation' as a cover term.
[6] Quoted in Boztepe (2008: 12)
[7] Quoted in Avalösch (2007: 32).

'trigger words' should not be accounted for as CS items, because they belong to both languages.

1.6. Communication barriers

Communication is said to be perfectly completed when the addressee receives and understands the exact meaning that the addresser intended to convey, i.e., the ideas and thoughts should remain the same. Zastrow (2001: 130) sates that 'a breakdown in the communication process may occur if the intended message was not encoded or decoded properly.' In many cases, communication problems arise as a result of certain obstacles that interfere with the transmission and understanding of the message. Hence, communication is either incomplete or it may not take place at all. These obstacles may be physical (in information theory the term 'noise' is used), psychological social, linguistic and are referred to as 'communication barriers'. Adedina (2006: 89) defines communication barriers as the hindrances that 'affect the flow of information in communication process.'

1.6.1. Linguistic barriers

An number of linguistic barriers or language pattern problems often hinder communication between interlocutors, the most salient being:

a) **Lack of common language**

If the sender and receiver speak two different varieties and do not share a common code[8] , then this latter will represent a linguistic barrier to communication.

b) **Semantic barriers**

Sometimes, people attribute different meaning to the same word or expression. Rodriques (2000: 46) refers to this as 'semantic noise' and states that 'A word can have different meanings to different people at different occasions.'(*ibid*: 100). Consequently, communication might fail.

[8] Wardhaugh (2006 : 88) argues that 'the 'neutral' term code, taken from information theory, can be used to refer to any kind of system that two or more people employ for communication.'

c) **Poor vocabulary**

Limited vocabulary can stand as a major barrier to communication. Sometimes, people fumble vainly for a suitable word or phrase making long and vague sentences that the addressee does not understand.

d) **Roundabout verbiage**

'Rounabout verbiage' refers to 'the use of overworked, troublesome and exhausted words and phrases which usually cause a considerable amount of misunderstanding and confusion' (*ibid*: 102). Alternatively, it is the use of too many words or phrases to express an idea more than it is needed and which rather muddle the interlocutor.

1.6.2. Physical barriers

Communication can also be affected by different types of physical barriers. Yet, we suppose that D-P communication is mainly affected by time shortage which can interfere in the flow of information and thus creates a barrier to communication. A physician, like any speaker, is sometimes bound to produce short and unclear messages with little explanation due to lack of sufficient time. It is also possible to face other sociological, psychological and geographical barriers like gender, age, educational background, region, attitudes and beliefs which inevitably affect the way we speak and stand as strong barriers to successful communication, as we shall see in the next section.

1.7. Barriers to health care communication

Among the serious problems that physicians and patients face during medical encounters are language and other barriers to communication which, as a consequence, affect health care quality. The United States is one important example of countries that are exposed to communication difficulties, because of the high and rapid growth of immigrant population which led to a phenomenal increase in linguistic and cultural

diversity. According to the 2001 Supplementary Survey by the US Census Bureau[9], 12,5% of the US population are foreign born, and it is reported that 55% of them speak English either 'not well' or ' not at all'. Limited English Proficiency (LEP) creates language barriers for both foreign-born population and monolingual American physicians during medical interviews. P.M. Schyve (2007) includes LEP within what they term as 'triple threat' to effective health communication together with low health literacy and cultural barriers in the US [10]

1.7.1. Language

Concern related to language as a barrier to communication in health care involves people with LEP, differences in languages and linguistic varieties, conversational differences, communication disorders and so on. The National Health Strategy Issues Paper (1993:19) states:

> The lack of a common language between patient and health professional can have serious implications for their communication, for diagnostic accuracy and overall quality of care.

In the same paper, it is further explained that dissatisfaction and frustration among patients is sometimes owing to language differences, which inhibit patients from describing the symptom they experience and asking for information and clarification in addition to health providers' limitation to talk to their patients clearly and effectively. Woloshin and his associates indicate that 'Without effective use of language, the physician-patient relationship is seriously impaired' [(Woloshin *et al.*, 1995: 727) *in* Sharon M.Lee, 2003: 05)].

[9] www.jaoa.org/content/109/12/634.ful#ref-3 Accessed on 28/11/2011.
[10] Source: www.ncbi.nlm.gov/pmc/articles/PMC2078554 Accessed on 28/11/2011.

1.7.2. Health literacy

The concept of 'health literacy' was developed by Rotzan and Parker (2000) then, used by the Institute of Medicine (IOM) in the 2004 report 'Health Literacy: A Prescription to End Confusion' as 'the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions' (IOM, 2004: 32) By this definition, many individuals can be seen as functionally illiterate. One reason is that; language of medicine is highly technical and may be difficult for outsiders to understand. Patients, on their part, may feel overwhelmed by their incompetence to understand the physicians and to make their needs known. Thus, it is conceivable that they leave the physician's office or the hospital without asking for clarifications.

1.7.3. Culture

'Culture'influences to a large extent the way people perceive and respond to illness and health. Terry L. Cross *et al.* (1989:iv) define culture as 'the integrated pattern of human behaviour that includes thoughts, communications, actions, costumes, beliefs, values and institutions of a racial, ethnic, religious, or social group'. It is clear from this definition that language is closely related to culture which is also reflected in language use. Along the same line, Leininger and McFarland (2002: 47) states that culture refers to: 'the learned, shared and transmitted knowledge of values, beliefs, and lifeways of a particular group that are generally transmitted intergenerationally and influence thinking, decisions, and action in patterned or in certain ways'. It is evident from these two definitions and others (e.g., c.f., Sir E.B. Tylor, 1871; Raymond Williams, 1958) that culture is often associated with language and shapes people's behaviour and practices including communication, choice making and decision taking.

Most often, cultural preferences lead to misinterpretation of medical messages, prescriptions, and the advices that doctors provide patients with or may prevent doctors from taking a good history. Yet, it is possible to find people who are born in

the same place and speak the same language but do not share the same culture or all aspects of their local culture. There are some people who believe that some illnesses are caused by ghosts and spirits and use strange terms to refer to them.

1.8. Sociolinguistic aspects of D-P communication

Previous researches have not taken sufficient account of the effect of sociolinguistic variables on D-P communication. In what follows we consider some of the linguistic aspects that create communication gaps between doctors and patients.

1.8.1. Terminology and register

Medical terminology is one of the most easily identifiable linguistic criteria in health care communication. Margaret Simmons (1998) asserts that it is difficult for any patient to use or understand scientific vocabulary and scientific description of illness and treatments. As a result, a patient cannot fully and easily take part in a conversation with a physician when this latter uses a scientific register loaded with medical terms.

1.8.2. Structure of doctors' questions

In her analysis of queries and replies in physician/patient dialogues, West (1983) perceives that timing and linguistic structure of the doctors' questions restricts the answers of patients. Simmons (1998: 92) shares her perspective and explains that

> Doctors often structure questions in such a way as to ask patients several questions but allow space for only one answer […]. Additionally, doctors sometimes begin asking new questions during the patient's answer to the previous question(s).

When one reviews the literature, it appears that doctors spend more time on asking questions to patients. Roter *et al.* state that asking questions is the frequent kind of exchange for physicians (Ong *et al.*, 1995: 22). These questions are mostly 'yes or no questions' or 'multiple choice questions'. Furthermore, Waitzkin (1984) reports

that in spite of the long time spent on asking questions, little information is given to patients, on average a little more than one minute in interviews of 20 minutes (ibid).

Also, doctors behave like dominant interlocutors. They take more turns than patients do during a medical encounter and most often usurp patients' answers and talk when patients might gain a turn to speak. They may respond to questions by asking other questions. As a consequence patients may consider this as a sign of disregard and rudeness (Simmons 1998).

1.8.3. Language and group membership

Speaking like patients means that doctors use the normal format of language in a conversation, i.e., they speak in the same way in which patients have skills and experiences. Patients might be able to participate and converse more fully. Following from this, they can provide doctors with more information and learn more about their disease and of course take more responsibility of their treatment.

Yet, it is worth mentioning that it is through the choice of vocabulary, register, style, dialect or other codes and varieties that people can both accomplish communicative acts and identify themselves as members of a specific group of speakers. Thus, ' "speaking the same language" is one way to establish rapport with an interlocutor, but "speaking the same language" also, in a way, classifies the two participants as members of the same group' (Simmons, 1998: 95). This implies that if the doctor chooses to speak like patients, using the vocabulary, register, style, etc. they are familiar with, he or she will be said to seek solidarity with the patient. This, consequently, could mean that he or she is giving up the status and power vis-à-vis the patients and yields his or her authority as the expert, and therefore, doctors might lose the patient's confidence. Simmon's (*ibid.*) supports that 'docors do not talk like patients' because when they do so (i.e., speak like doctors) first, they maintain their solidarity and relationship with other physicians and the tradition of medicine which encompasses higher education, higher socioeconomic power and status. Secondly, they identify themselves as members of the group of physicians and obviously as non-

members of the lower educated people of lower socioeconomic status to which a lot of patients are part of. Simmons (*ibid.*) adds that 'In effect, it may be precarious for doctor's professional and social identity 'to talk like a patient'.'

What happens to doctors can be explained in terms of what Herman (1968)[11] calls 'overlapping situations'. It is likely for bilingual speakers to find themselves in some problematic psychological situations. Fasold (1984: 187) explains that

> More subtle is the 'background' group, which Herman describes as 'groups in the wider social milieu that are not directly involved in the immediate situation but yet may influence the behaviour — "hidden communitees", so to speak' (Herman 1968: 494-5). That is, or may want to dissociate himself from that group.

To put it simply, it happens that a speaker uses, simultaneously, more than one language variety because in a particular interaction the speech of an individual can be influenced by his or her own language preferences and at the same time by the speech of the other interlocutors or by the social context.

1.8.4. Code switching

Tannen and wallat (1986) shed light on an important point that doctors obviously at certain time of their lives have themselves been patients whereas most patients have not been doctors. So, as doctors know how to be physicians and how to be patients, they may switch between 'doctor talk' and 'patient talk' (Simmons, 1998: 96) and alternate between the medical terminology, jargon and usual terminology, depending on who is present in the medical encounter. Quite similarly, Ong *et al.* (1995: 27) consider doctors to be bilingual, since they speak their everyday language and at the same time are fluent in medical language 'Doctors are bilingual: they speak

[11] Cited in fasold, 1984: 187

their native everyday (EL) language, but they are also fluent in medical language (ML)' while patients are mostly monolingual 'Patients are typically unfamiliar with ML and are only conversant in their everyday language.' During the D-P communication process, CS occurs when doctors switch between ML and EL or when patients with some understanding of medical language employ their ML knowledge to communicate with doctors for the sake of clarity and effective communication. Bourhis *et al.* (1989) regard the use of ML by physicians as problematic to patients unlike the use of EL which rather promotes understanding.

Yet, another perspective is brought by Mishler (1984: 14), who proposes another dichotomy: 'the voice of medicine' and 'the voice of life world' representing, respectively, the technical language used during clinical practices and the natural use of everyday language. Both doctors and patients need to use 'the voice of medecine' during the history taking and exchange of medical information and switch to 'the voice of life world' to express personal meanings.

1.9. Approaches to D-P communication research

1.9.1. Ethnography

'Ethnography' is a blanket term used to cover a variety of methods of data collection for an in-depth descriptive analysis of cultures and people. The term is steeped in an anthropological tradition and attributed to the anthropologist Clifford Geertz in the 1970s. Engaging in ethnographic research entails prolonged fieldwork and close exploration of data. Data is collected through participant observation, interviewing (both formally and informally) individuals many times. Ethnography uses dialectic methods which allow the researcher to understand the participant's viewpoints, i.e., data is analysed in terms of an 'emic' approach, in other words, data is interpreted from the perspective of the population under study (Hancock, 2002: 05). In health care settings, ethnography helps researchers discover the cultural features affecting patients' and doctors' behaviour and responses to health seeking and health provision during the medical encounters.

In her work on qualitative approaches to D-P communication in oncology hospitals Felicia Robert (2010) believes that: 'an ethnographic approach can provide a wide scope, […], or studies can be more focused on particular segments of a culture' (I*n* Kissane *et al.,* 2010: 697)

1.9.2. Individual interviewing

It is a core technique of research especially in social sciences that can be defined as a conversation with a basic beneficial purpose for the researcher as it aims primary at eliciting data from the other participant. There are different types of interviews that can form a continuum.

a) Ethnographic interview

Ethnographic interviews 'are those conversations that can just happen when the researcher is in the study setting and something serendipitously prompts a question related to the research project' (*ibid*: 698). In this type of interview the researcher does not have a clear or definite purpose. He or she simply takes advantage of his or her presence in the research setting to get information which may come by chance and raise some important issues that allow him or her to consider some important aspects of the topic under investigation and include them to give more explanations.

b) Informant interview

In contrast to the ethnographic interview, the informant interview is designed with a clear purpose that drives participants to talk about their experience and disclose the information of interest to the researcher. The participant may be contracted in more than one occasion and the conversations involve a series of open-ended questions.

c) Respondent interviews

They are brief and very much like a questionnaire. D-P communication researchers use this kind of interviewing because they can pre-set the questions in a

particular order and a way that restrict the scope of answers and information to be elicited.

1.9.3. Focus groups

This method is preferable to gather data from a group of people. It is used in investigating D-P communication because many researchers (e.g. Zimmerman & Applegate, 1992) believe that during a group or team activity patients and doctor are more likely to reveal facts about treatment and professional concerns through real stories and accounts. Moreover, focus groups method allows researchers to get deeper and thorough insight from the participant's natural and spontaneous speech.

1.9.4. Grounded theory

This approach stemmed from the work of Glaser and Strauss on interaction between health care professionals and dying patients. They have employed field observations and in-depth interviews to ‘grasp the actor’s viewpoint’ (Strauss, 1987: 06). The purpose of this approach is to create meaning by combining the available elicited information, instead of dividing interactions into units and analysing them separately.

1.9.5. Conversational analysis

Conversational analysis (CA hereafter) is one of the different approaches of discourse analysis. It is another approach used in the study of D-P communication. Perhaps, the idea of using CA in D-P communication studies emerged thanks to David Pendleton’s and his associates’ strong criticism against the existing researches, at that time, on the process of medical consultation, which they compare to 'the listing of ingredients in a cake without the analysis which shows how to put the ingredients together' (Pendleton *et al,*. 1983: 205). They further argue that studies on medical encounters lack analysis' in terms of social interaction' (ibid).

Since then, many conversational analytical studies on health care communication have evolved through the works of Heath (1981 and 1982), Frankel (1983 and 1985), and West (1983 and 1984). CA is associated to the work of Harvey Sacks who was examining a corpus of recorded telephone calls to the Los Angeles Suicide Prevention Centre (Wooffitt, 2005:06). It studies language as a social behaviour and systematically examines naturally occurring, face-to-face interaction. It is always based on the use of audio or video recordings of interactions which should be carefully transcribed for detailed analysis. This type of qualitative examination of the interactional tasks of both doctors and patients allows researcher to describe how messages including patients' complaints, history taking, diagnosis and recommendation giving, etc., are sent and received, during the medical encounter. Maynard (2003) for example used this method in his study on bad news delivery (Roberts *In* Kissane *et al.*, 2010:700).

1.9.6. Ethnography of communication

Ethnography of communication, on the other hand, is different from CA and does not include a micro-analysis of recorded face-to-face interaction. It aims at describing and interpreting language use in its cultural setting, i.e., it takes into consideration the cultural knowledge and behaviour of the participants.

Dell Hymes (1968) founded this approach to bridge the gap in research between anthropology and linguistics[12]. His focus is on the cultural variables that influence the communicative behaviours and speech events. It attempts to discover and analyse the different forms and functions in communicative in activities in social and cultural settings. This method uses field observation, interviews; collection of artifacts, etc., Felicia Roberts (ibid) states that Fisher (1983), in his work on how treatment decisions are negotiated in D-P communication, used this framework through the analysis of physicians' linguistic attitudes toward different patients to meet what could not be explained on medical or socio-demographic grounds**.**

[12] Now it is regarded as a branch of sociolinguistics

1.10. Conclusion

The aim of this chapter is not a per se criticism of doctors' and patients' speech in interaction. Health is a delicate issue and is crucial for all people to lead a normal life. The discussion of the aspects of language and D-P communication shows that studies on communication are as important as studies on health technological developments. Healthcare communication is worth investigating because it is affected by the use of language which is itself affected by the premises that language is variable, people are different from each other in their social and psychological background and vary their speech according to the context in which interaction is taking place. This variation may be a source of problems.

Chapter two: Language Situation in Algeria

2.1. Introduction

Algeria is one of the different countries where historical, political and social circumstances have shaped its complex linguistic profile. To this day, a number of linguistic varieties are coexisting and used by Algerians: Algerian Arabic, Modern Standard Arabic, French and Berber. However, though Algeria is characterised by societal multilingualism, members of its population are not all multilinguals nor bilinguals.

This chatper presents a bird's eye view of the events that Algeria went through and that led to the forming of today's linguistic landscape. Bilingualism and differences in linguistic proficiency will be its focal points.

2.2. Historical background

Algeria has a lot to offer in any kind of historical research. Throughout ancient and modern history it has existed as a land of multiple civilizations, wherein people of different races and languages succeeded one to the other. It was invaded by the Phoenicians, the Romans, the Vandals, and the Byzantines. Then, the Arabs, the Spaniards, the Turks, in the pre-Islamic times, and finally the French. They all left their traces in the varieties actually spoken in Algeria, though to importantly different degrees, as we shall see.

2.2.1. The ancient era of Algeria

It is acknowledged by all that in ancient times Algeria was known as Numidia (202 B.C – 46 B.C) which was the most prominent dynasty of the region. Its early dwellers were Berbers of different tribes who were scattered throughout the vast regions of North Africa. They spoke different Berber varieties that are termed nowadays 'Tamazight' referring to all the Berber dialects used in North Africa. In fact, the Berbers had had a consonantal writing system since antiquity. However, during the whole ancient history, they have left a sprinkling or no written documents in their language. They employed mainly the scripts of the other foreign settlers as put by Mouloud Mammeri (1989)

> In Roman times, Latin was the language used by Tertullian, Cyprian, Augustine, Fronto, Arnobius, and Apuleius, even though the books of these writers provide clear evidence of their Berber origins. […] Since then and to this day, the situation has not changed. In all the countries where it has been spoken […] Berber has always remained hidden behind the scenes. […] For over three thousand years, Phoenician, Latin, Greek, Arabic, and French have been used in writing, but nobody has written in Berber. (*In.* Mena Lafkioui and Vermondo Brugnatelli, 2008: i)

The Berbers lacked a written language and hence, tended to be overlooked or marginalized by historians.

Around 800 B.C Carthage was established after Phoenician traders came and settled on the North of Africa. They spoke a Semitic language of Canaanite subgroup which was close to Hebrew and Aramaic. Later a mixed variety of Berber and Phoenician, 'Punic', started to be used especially in the West of the Phoenician empire in North Africa. This variety is said to be still employed in this region even after the decline of Carthage which was a result of the Punic wars against Romans in 146 B.C.

Henceforth, the Berbers' power grew and the Berber kingdom Numidia emerged in 200 B.C and became the most prominent Berber dynasty, but, unfortunately, they were once again taken over by the Romans. During the latter's province, Berber tribes had been converted to Christianism 'en masse'. Despite this, the native tribes stuck to their original language. One proof is the fact that St. Augustine, the Bishop of Hippo Regius, used to send Punic speaking priests to his followers to use it as a lingua franca because they did not speak nor understand Latin.

During this period of time, the whole area flourished, roads and towns were built. The Romans were very developed in agriculture and irrigation system .They also

built viaducts and storage water tanks. They could divert water away from the indigenous landowners towards the Roman towns and plantations.

The Roman towns expanded gradually and continuously as the Romans took more native farmlands. The Berbers were squeezed between the advancing desert and the Roman legions. They decided to benefit from the opportunity offered by the decline in trade and the weakening of Roman defences in Western Europe by the German tribes, in addition to the arrival of the Vandals in North Africa in 429 A.D.

The Berbers, who had been edged out of the Roman Province, started counterattacks against the Romans and took back control over their lands and towns. They became independent and the Roman Empire collapsed within a decade. The Vandals crossed Spain and established control over North Africa, but their reign brought much destruction and caused economic decline. Nevertheless, several Berber dynasties manage to emerge in isolated areas. Little is known about the invadrers' language. It is said to belong to the East Germanic family, but it had no writing system. The most known Vandal writers and poets used Latin which was also used in administration.

There are two views as far as the influence of the vandal language and culture on the Berber one. Some of the historians say that Vandals had never mixed with Berbers, and that there were no intermarriages between them, as Berbers found refuge in the inaccessible mountains and far desert areas. As a result, there could not be any influence on the Berber languages. On the other hand the second group of scholars such as Cheikh Anta Diop (1991)[13] believes that the Germanic Rule of Vandals on North Africa had a linguistic influence on Berber. He points out that Berber language contains many Germanic vocabulary items and that the same syntactic rules are applied in feminine and plural noun formation in both languages.

[13] Quoted from http://bafsudralam.blogspot.com/2009/12/vandal-origin-of-berbers.html (Accessed on 02/01/2012)

In 533 AD., the Byzantine emperors[14] landed in North Africa and within a year could destroy the Vandal kingdom. The Byzantines were at the same time in endless wars with the Persians. It was hard for them to control the whole area of the Maghreb and to subdue the native tribes so they played-off the coastal tribes against each other to weaken them, while, on the other hand the inland tribes were already fighting each other permanently. Numidia was ruled back by the Romans, e.i., Byzantines, until the arrival of the Muslim Arabs in the 7th century.

2.2.2. The arrival of Islam and Arabs

In the dawn of Islam in the 7th century, the Muslim armies quickly started their Islam 'opening' operations in the Middle-East and Egypt in 642 A.D., then, they moved towards the rest of North Africa.

The first Arab expansion into the Maghreb was between 642 A.D. and 669 A.D. Most of the Berbers were converted to the new religion rapidly and easily despite a considerable resistance from some Berber tribes especially in the Aures region but mostly from the Byzantines. Nevertheless, the Muslims could take Carthage in 663 A.D., and shortly afterwards arrived to Morocco.

It is worth mentioning at this stage that the reason behind the acceptance of Islamisation and Arabisation is the fact that unlike the Romans and the Vandals, the Arab Muslims did not dislodge the local people from their lands or had them as serfs.

Basically, the Muslim expansion was not a kind of conquest as many historians refer to it. It was rather an opening on Islam /ʔalfatħ Blʔisla:mi:/. There developed a kind of alliance between Arabs and Berbers. Berbers could maintain their patrimonial aspect of their culture as well as the different varieties of their language in many parts of the country and furthermore, just like some Berber tribes became Arabised some

[14] The Byzantine Empire was refrred to previously as the eastern Roman Empire.

Arab tribes became Berbophone as stated by Mostari(2005: 40)[15] "many Berber tribes became Arabised like 'The Zenata' and some Arab tribes like 'Les Beni Mhamed' became Berbophone". Besides, North Africa became closely interlinked to the Muslim world, and cities likes Tlemcen, Bejaia and Constantine became very productive in terms of Islamic studies and science, in which influential dynasties had been established such as the Rustamids, Fatimids, Idrissids, Zirids, Almohads, Merinids and thus contributed to the spread of Islam to Al-Andalus and other parts of the world. For this reason and others, the Berbers needed to learn Arabic to accomplish their Islamic and political goals and mainly to practice their religion, regardless of what language they used in their everyday life as explained by Dendane (2007:77) "the newly converted people, had to make efforts to learn Arabic because prayers, preaches and sermons were performed in the 'sacred' language and the Quran is to be learned in Arabic."

The Arabic language has many forms. There are different regional varieties (i.e., dialects), also referred to as /ʔal-ʕaːmija/, that are spoken by particular people from particular regions in their daily conversations such as Algerian Arabic (AA herafter), Egyptian Arabic, and other prestigious forms such as classical Arabic(CA herafter) and Modern Standard Arabic(MSA herafter). CA is also known as Qur'anic Arabic because the holy book of Islam was sent to the Prophet Muhammad (PBUH), during the classical period, in the variety that was spoken by his tribe "Quraysh" and it is usually referred to as /al-fusħa/ or /fusħatu at-tuːraːl/ by Arabs to mean 'the clearly spoken Arabic' or 'the language of eloquence'. It is considered to be sacred and it has been preserved intact because the least change in writing it or speaking it is believed to be sinful by Muslims.

MSA, on the other hand, stands for what is known today as / fuṣħatu al-ʕaṣr / to distinguish it from its historical antecedent CA. It is a modernised version of CA which is "reconstructed from a selected, close textual corpus, clearly removed from

[15]In: Journal of Language and Learning. Volume 3 Number 1 2005. ISSN 1740 – 4983. http://www.jllonline.co.uk/journal/jllearn/3_1/mostari.htm (15/03/2012).

everyday speech" (Lancioni, 2009:219) It is, mainly, reserved for elevated discourse, contemporary literature and the mass media. We should stress that there are no native speakers of MSA; it mainly propagates through formal means like education and the mass media [(Abu-Haidar, 1992:93) *in*. Mark van Mol, 2002:92].

Later on there appeared divisions and splits among Arabs Muslim on who must be the head of Islam. This period was characterized by constant conflicts and instability. This slowed down the diffusion of Islam in the world. Arabic was not generalized so far. The 11th century had seen a renewal of the Islamic power that was accompanied by a large incursion of Bedouin Arabs who settled in the countryside and helped spreading and arabising gradually many of the sedentary Berbers living there.

By the end of the 15th century, the Spanish conquered the Moroccan coast and the western coast of Algeria for about three centuries (K.Taleb Ibrahimi, 2004). This explains the omnipresence of many Spanish words in the dialects used in the north - west of Algeria such as /Blbanjo/ (the bath), /BlfiGta/ (the party), /Blbogado/ (the lawyer), /Bssimana/ (the week), /Blkuzina/ . At this same period the Eastern part of Algeria was occupied by the Italians.

Then, around the mid - 16th century, the Spanish were expelled with the help of the Ottoman Turks (troops of the Barbarossa Brothers) who were appealed for by the local people. The Ottoman Turkish Empire assumed control over the area for about 2 centuries. They exerted a powerful influence on the customs and cultural aspects of Algerians, as well as on the linguistic ground. Words like: /Blbabur/ (the ship), /Bttubsi/ (the eating plate), /BlmaʕdnuS/ (the parsley), /Blbranija/ (the aubergine) , etc., are still used to this day, although the European colonisation has replaced the Turkish domination in 1830.

2.2.2.1. Medicine in Algeria during the Ottoman period[16]

During this period that lasted from the arrival of the Barbarossa brothers until 1830, three types of medicine coexisted. Each one was tailored and addressed to a particular type of population.

European medicine

It was reserved for the most part to European captives and was also delivered by European physicians that were kept as prisoners. The hospitals were founded in prisons, mostly, by Christian religious men. To illustrate, in 1551, the Spanish priest Sebastian Duport created a care home for the captives. In 1575, a Capuchin monk founded the hospital of Spain, which was the largest of Algiers. In 1612, another priest, Bernard de Monroy founded the hospital of the Holy Trinity, in the prison of the Pasha at Bab Azzoun, a district in Algiers.

In 1646 a religious mission founded a hospital in Algiers, which remained open until 1827. Among the famous captive European physicians we can refer to Guillandin Melchior, professor of medicine at the University of Padua, who was held captive in Algiers from 1557 to 1561. Murillo, Spanish doctor of Marbella was captive in 1649 and was freed after serving three years in Algiers. Robert Hiérome, master surgeon, a native of Provence, who had visited Algiers from 1689 to 1697. Pascal Gamissot, an Italian doctor who was employed by Salah Bey of Constantine in 1713. Sanchez, Spanish surgeon who practiced at the hospital in Algiers in 1786.

Turkish medicine

It was military-oriented to the Turks who came to Algeria as young military recruits in the very prime of life and who went back to Turkey when they ended their mission. The first Turkish hospital was built in 1550 by Hassan the son of Barbarossa Khair-Eddine. In fact, the Turks being relatively few in Algeria, their health needs

[16] Information in this section is taken from: http://www.santetropicale.com/santemag/algerie/hist/index.asp (16/02/2012) Mostéfa Khiati (2000).

were relatively small. The Bech-Djerrah[17] (i.e., a surgeon physician) or the Amine of physicians was regarded as top health official and was responsible of the highest medical missions that were carried out in what is currently known as CHU of Bab El Oued. His medical crew included military Turkish doctors who came from Egypt and Turkey. The Turkish physicians practiced for a specified period in Algeria, but some of them also worked as private doctors when their military service ended. There were also some nursing homes that continued to work until the French occupation.

Folk medicine

Folk medicine was a continuation of Arab medicine, rather reserved for the indigenous population. Folk medicine was mainly based on natural medicine and the use of medicinal plants that were collected locally. The doctor was called /ħaki:m/ (i.e., 'wise'). They worked especially during market days. Some barbers were also working as doctors and dentists. Health services were also delivered by some tribes who were known for their knowledge of medicine especially in the spiritual healing arts, wounds and fractures. On the other hand, women were mostly treated by some midwives called /qabla/. Those ancient medical practices, however, have influenced the contemporary health culture and behaviours. Yet, several hospitals existed in Algeria during that time, particularly in Algiers, Tlemcen, Oran and Bedjaïa. Among the famous physicians of this period one can mention El Djazouli, doctor who lived in Tlemcen in 1068 of the Hegira, Mohamed Ibn Ahmed El Hassani, who also lived in Tlemcen, Nour Eddine Ibn Nasr Eddine El Makky, Ahmed Ibn El Kassem Bouni (1653-1726), born in Annaba, Khalil ibn Ismail al Jazairi known for his book:" The treasures of the soul to overcome the difficult diseases", Abderezak Hamadouche Ibn al Jazairi, born in 1107 of the Hegira, Ahmed Ben Belkacem, a surgeon who lived during the time of Ahmed Bey of Constantine. He excelled in neurosurgery and treating fractures of the skull. The Turks and Europeans had often recourse to him.

2.2.3. The Algerian society during the French occupation

[17] The word 'Bachdjarah' is now given to a city in the South-east of Algiers.

In 1830, Algeria was once more invaded by one of the most barbaric colonizer, France. Very soon in 1848, Algeria was declared as a French territory which opted for a total occupation and adopted a policy of raids and systematic destruction of villages and local culture (Benrabeh, 1999: 44). Under the mask of bringers of civilisation, as it is believed by Bourhis (1982:314) "the French colonial empire guaranteed the spread of Standard French as the language of civilization beyond Europe", the French planned for acculturating the Algerians and introduced their language as the dominant one, ousting the local languages, Arabic and Berber. Chomsky (1979: 191) states, in this respect, that "questions of language are basically questions of power". M. R Maamri (2009:78) says as far as this hegemonic policy is concerned that "The French powers presented themselves to the native people as the bearers of agents of science, rationality, progress and the enemies of religion and backwardness, hence as the agents of civilisation.".

But in reality, French was imposed because they feared the presence of Arabic and Islamic mind in Algeria because they were believed to be strong factors that may lead to union among the oppressed population and may trigger national consciousness. So, they fought vigorously Islam and CA to produce new people cut off from their own culture and values, and consequently, easy to manipulate. Lacheraf (1998: 314)[18] witnesses that the French left Algeria with a very low rate of literacy, much lower than it was when they came: "The Arab, in 1830, could read and write. After half a century of colonisation he stagnates in ignorance." Kh. T. Ibrahimi (2004:212) holds on the objective behind this hegemonic francisation policy carried out in Algeria that:

> French, an imposed language on the Algerian people by fire and blood, has constituted one of the fundamental elements used by the colonial power to enhance its control over the conquered country and accelerate the process of destruction,

[18] My translation of ' L'Arabe, en 1830, savait lire et écrire. Après un-demi sciècle de colonisation il croupit dans l'ignorance.' Source : http://www.tlfq.ulaval.ca/axl/afrique/algerie-2Histoire.htm (Accessed on 13/02/2012).

> depersonalisation and acculturation of a territory which became an integral part of the "motherland", France.[19]

In the first decades, France closed many schools, medersas and mosques where classical Arabic and the Qur'an were taught. Moreover, the coloniser confiscated the 'habus' lands (lands belonging to religious institutions) and the religious foundations that subsidised teaching in those institutions.

At first, this oppression engendered a strong rejection of the French instruction, among Algerians; they associated it with an attempt to christianise their children and to practice cultural cleansing. Therefore, this led to a serious situation of illiteracy and ignorance. Soon, in the 1880s, attitudes towards the French schools had considerably changed. After WWII, the Algerians started to be more aware about the importance and necessity of instruction and schooling of their children; Benrabeh (1999:56) qualifies this as 'un mal nécessaire', i.e., 'a necessary evil'. So, parents had to compromise in order to get their children educated. They then recognised the intellectual, political and economic benefits they could obtain therefrom. In this respect, Kh.T. Ibrahimi(ibid) further points out that:

> [Algerians] had understood that they had to appropriate the language of the occupier and their way of thinking to counter them in thier own ground, they had to arm themselves with their own weapons to enter the modern world, […]. The country had at all cost to leave the world of ignorance in which the majority of people lived.[20]

[19] My translation of 'Le français, langue imposée au peuple algérien par le feu et le sang, a constitué un des éléments fondamentaux utilisés par le pouvoir colonial pour parfaire son emprise sur le pays conquis et accélérer l'entreprise de déstructuration, de dépersonnalisation et d'acculturation d'un territoire devenu partie intégrante de la « mère patrie », la France.'

[20] My translation of '[Les Algériens]ont compris qu'il fallait s'approprier la langue de l'occupant et son mode de pensée pour le contrer sur son propre terrain, qu'il fallait s'armer de ses propres armes pour entrer dans le monde moderne, pour mieux s'opposer à la présence coloniale et se défendre contre l'oppression et l'injustice. Le pays devait, à tout prix, sortir du monde de l'ignorance dans lequel vivait la majorité du peuple.

However, it is worth stressing that education did not cover all the spheres of society. It was mainly spread in the urban cities where a large number of Europeans lived and were in permanent contact with the Algerians and also a lot of rich Algerians whose socio-economic level allowed them to access even higher education. The indigenous people in the cities, in fact, appeared to be more opened to the new culture, unlike people in many rural regions who kept rejecting the coloniser's culture.

In the 1920s, access to education allowed the new colonised generation to develop a sense of consciousness, and awareness of being deprived of their heritage which they wanted to restore. Meanwhile, there emerged an intellectual elite appealing for National liberation movements, the most important leading figures were; Messali Hadj, Abdelhamid Ben Badis and Farhat Abbas who had struggled claiming for the officialisation of Arabic and tolerance toward Islam. Later on, these movements led to the appearance of many political parties, such as ENA (The North-African Star) in 1926 which, after it's disbanding by the French power in 1937, became PPA (The Party of the Algerian people), to become once again MTLD (The Movement to the Triumph of Democratic Liberties) and out of which sprung up the FLN (National Liberation Front) which launched a guerrilla war for independence on the 1st of November 1954 (Benrabeh,1999: 56-57).

This switch of ideology vis-à-vis the French language will, indeed, mark the linguistic profile of independent and present day Algeria.

2.2.3.1. Medicine in Algeria during the colonial period

Although, medicine, in Algeria, dates back to times well before the Ottoman period, the modern medical practices began with the French colonization and more precisely by the French army who had in fact to preserve and ensure safety and medical care for their soldiers, fellow citizens and also for the indigenous cheap labour force.

During the colonial era, medicine could be divided into two periods[21]; the first period extended from 1830 to WWI, when medicine was used as a means of colonial propaganda of actions of civilization and modernization, and hence, of social penetration. The second period lasted from the beginning of the 20th century to independence. It was characterized by the gradual marginalization of the indeginous population and then the access of some Algerians to medical studies.

A military hospital was established in Algiers in the former Turkish barracks of Caratine. In 1832, this hospital was moved to the gardens of the former country home of the Dey Hassan Pasha and became a military hospital of medical instruction thanks to a young military surgeon, Lucien Jean Baptiste Baudens (1804-1857) who was convinced of the role of medical education as to an influential effect of the French civilising actions on the local people[22]. From this hospital spawned the faculty of medicine and pharmacy of Algiers which, one century later, became one of the best French universities. Later, other hospitals were built in regions and cities like Oran, Mostaganem, Guelma, and Constantine, where lived French settlers and French soldiers and in which, mainly, Europeans were treated. In contrast, Algerians could only have some sick-bays in some areas and very few had a permanent doctor because of a high shortage in the number of doctors, at that time, which was not enough even for the European population. However, the Algerian population continued to rely on traditional folk medicine that was practiced before the French occupation because of segregation in treatments between the Algerian and European people in hospitals. Hence, being afraid of the diverse epidemics developing across the country, the French authorities appealed for support from some charitable missionaries such as: The Sisters of Christian Doctrine settled in Constantine, Trinitarian nuns in Oran, the Sisters of St. Joseph in Algiers to provide the indigenous people with some health services.

[21] *M.KHIATI Professeur de pédiatrie (In "histoire de la médecine en Algérie" Ed ANEP 2000) Source :* http://www.santemaghreb.com/algerie/hist/index.asp *A ccessed on 25/03/2012*

[22] Les anatomistes d'Alger durant la période coloniale française (1830-1962) par Jean-Marie LE MINOR. Source : http://www.biusante.parisdescartes.fr/sfhm/hsm/HSMx2005x039x004/HSMx2005x039x004x0385.pdf Accessed on: 25/03/2012

The French medical education began in 1833[23], when some pathology courses were delivered in Algiers. In fact, it was first reserved, of course, for students of European origins. Although, theoretically it was also opened to the indigenous students by the decrees of 14th of March and 3rd of April, 1857. In 1865, only five Algerian students were registered. Besides, in the period between 1875 and 1878, 85 Algerian students were enrolled in medical studies but they could not carry out more than the first two years. From 1879 to 1909, only one Algerian student was graduated in medical studies, Mohamed Benlarbey[24], the first Algerian Doctor who successfully defended with honors his dissertation in Paris, the 16th of July, 1884. In 1939, there were 200 university graduate Algerian students; 41 doctors, 22 pharmacists and 9 dentists. But it was not until 1954, that the number doctors, pharmacists and surgeons had reached 165 and, thus could meet, to some extent, the health needs of Algerians, especially during the revolution.

2.2.4. Post independent Algeria

After a dominion that lasted for well over a century and about eight years of fight, Algeria finally became independent in 1962. However, as a result of its sustained expansion, the French language was deep-rooted and had great impact on the linguistic practices of the Algerian society (Dendane, 2007: 68-84) and strongly enough to become the language of the Algerian intelligentsia as stated in Benmoussat (2003: 101) "[...]the French language has been the language of the educated elite".

Although it is not our purpose in this study to dwell upon the language policy carried out in Algeria, it is still necessary to throw some light without much detail on the decisions undertaken by the new Algerian policy makers soon after independence. It is only to be expected that any newly independent country will attempt to restore its heritage and tradition and, at the same time, thrive through the emerging industrial and modern world. Arabic had to get back up on the stage, to recover its missing Islamic identity and to unify the diverse populations of the country. However, it was not an

[23] Boufnara and Labii (2009:14)
[24] Le premier Toubib Algérien (http://cheliff.org/portail/?q=book/print/295) Accessed on : 25/03/2012

easy task to put aside the French language that had affected all aspects of life of the Algerians from the different backgrounds during the colonial period.

Thus, an 'Arabisation policy' was launched aiming at decreasing the amount of French in addition to the various spoken mother tongues AA and Berber and promoting the use of Arabic. Though it is not mentioned in the constitution, it is MSA which is usually believed to be the one referred to as the language of instruction and wider communication. Benmoussat (ibid) points out, in this regard, that "one of the major decisions that Algeria undertook in 1962 in terms of status planning was the promulgation of Arabic as the national language of the country".

The term 'nation' is not used here for granted. It reflects the "emotional rejection of French after the war of independence" (Ager, 1990: 90) and a desire to unite the ethnically diverse populations through the promulgation of the available and already standard and well founded variety MSA, in contrast to, Berber and AA which are only spoken varieties. Besides, MSA was seen as a symbol of Islamic identity and nationalism before and after independence.

However, this raised some disagreement among the Berbers who felt somehow affected and deprived of their language. A language that they have maintained for hundreds of centuries and by vigorous resistance of all the former civilizations that trod upon their soil. We assume it to be redundant to emphasize on this point. What is interesting, in the post-independence period, is the tenacious spread of French which still remained functional and operational. The young nation had not yet the possibility to guarantee education for all schoolchildren in Arabic, because school materials in this language were not yet available. Furthermore, most of the Algerian teachers and educated people were extensively French-speaking and French educated. Moreover, as it was already mentioned in the previous section, France left Algeria with a very high percentage of illiteracy that was not easy to overcome with the very small existing number of teachers at that time. Accordingly, Dendane (2007: 85) shows us how the lack of Arabic speaking instructors and the cooperation between the former coloniser

with the young Algerian state contributed to furthering the impact of the French language in Algeria in the period between independence and the mid 1970s.

> Schooling could only be achieved in French as, on the one hand, the majority of teachers at that time had their diplomas in French, and, the other, and most crucially because of an urgent need for the 'intellectual' development of the young nation, the ministry of education had to have recourse to a great number of teachers from abroad, Europeans and especially from France.

In addition to a compulsory subject of French, this was, still, the language of instruction at all school grades for both art and scientific subjects. By contrast, Arabic could not enjoy more than one or two hours per week. Grandguillaume (2004: 05) claims on the cause behind the increased use of French after independence that "the expansion of enrolment helped to spread French much more than during the colonial period". Therefore, French became the dominant language of education, administration, business and most importantly of all scientific domains. This, of course, led those people who were educated and trained in French to have positive attitudes vis-à-vis French, associating it with prestige and promotion. It had no more those overtones of colonialism and oppression. Rather, it became considered as the language of modernisation, science and technology. Indeed, there developed a close relationship between French and the educated elite. They became much acquainted with French, a very prestigious variety, which its speakers favoured because everyone desired to be opened to the Western modern world for different purposes that might be educational, economical, social, political, etc. In the meantime, at the psychological level, the use of French allows them to identify themselves as members of the successful and intellectual people, hence, to distinguish them from the ignorant and backward-looking set of people. In this regard, Fasold (1984: 158) comments on the value of attitudes on clarifying "the social importance of language" and on understanding how it is used as a "symbol of group membership" in a particular society. He compares the ranks in solidarity and power scales of the speakers of the

high (prestigious) variety to those of the speakers of low variety. He finds that the speakers of the high variety have recorded high ranks in both solidarity and power scales. While, the speakers of the low variety have recorded high ranks only in the solidarity scale. This helps us to account for the reasons that pushed Algerians to have positive attitudes towards French. In sum, a speaker of a prestigious variety like French will use it to appear to have a sense of superiority and a high social status. These attitudes remain functional to this day. Moha Ennaji (2005: 198) notes that in many surveys on the attitudes towards French carried out in the different countries of the Maghreb; Algeria, Tunisia and Morocco. Most of the respondents demonstrated preference for French in different domains and considered it of a better quality. They believe that

> The use of French is also vital in securing a job or a service done quickly and in keeping the distance between speaker and addressee, or in preventing familiarity between, for example, teacher and student or between employer and employee. (ibid)

Yet, the post-independence period strengthened the impact of French on AA and Berber dialects. Many words, phrases and expressions had been integrated into AA and Berber and started to be used frequently by all Algerian speakers. Some of them had first been adapted phonologically and syntactically to the mother tongue rules. Examples may include many words that are used by elderly people such as:

/FBmanfu/: ‘je m’en fou’ in French to mean: ‘I don’t care’ in English.

/disbri/: ‘expret’ in French to mean: ‘done in purpose’ in English.

/sWji/: ‘ça y est’ in French to mean: ‘that's it’.

At the same time, Arabic preserved its prestige, too, as the language of the religion and the symbol of the Arabo-Islamic identity. But it had to wait until the late 1970s to be implemented gradually as the language of instruction in schools, then in universities. Primary schools were the first to be arabised. French became a subject of

foreign language taught at the 3rd primary year, then, in 1975, it was delayed for the 4th year, while the middle and high schools were using both French and MSA for scientific and literary subjects, respectively. In the 1980s, Arabic was generalised to cover all the curricula of all levels. A subject of Arabic on its own had enjoyed more time than before, and in comparison to the other subjects. But, at higher education, i.e., at universities, Arabisation started covering only the social and political science, law and economics (Grandguillaume, 2004: 05). French remained the language of teaching and training in almost all scientific streams, in particular medicine in which students pursued their studies entirely in French. Besides, many of them were being given scholarships to study abroad, especially in French universities.

Actually, this caused a split between two generations. A first one was intensively exposed to French, during the colonial and post-colonial periods, and thus, having a high degree of proficiency in this language. They used it in almost all their day-to-day activities and conversations. Indeed, speaking in French and switching from AA or Berber to French and vice versa became their default mode of conversation. But, they had difficulties in using CA and MSA. However, the new generation of the 1980s onwards, had little proficiency in French, because they studied mainly in Arabic. This group is more likely to face troubles in using French at university, at work, or when communicating with people who use much of French in their speech. But strangely enough, although they lack proficiency in French, many of this group try to use French when they speak even if they make mistakes, owing to the prestige they give to French, just as their ancestors did. They believe that French allows them to value themselves socially and to impress their interlocutors (Ennaji, 2005: 198).

2.3. Language contact in present day Algeria

In the light of what has been said thus far, it is obvious that Algeria is considered as a diglossic and multilingual country with a mosaic-like linguistic profile. Different language varieties CA, MSA, AA, Berber in different forms and French are in permanent contact.

2.3.1. Diglossia

Since the appearance of the concept of 'diglossia' brought into sociolinguistic literature by Ferguson (1959) a number of linguistic situations could be described and analysed. For instance, this concept has paved the way for studying societal bilingualism that characterises different speech communities of which Algeria is a perfect example. Ferguson's original theory summarised diglossia as a situation of the coexistence of paired varieties of a particular language that "exist side by side throughout the community with each having a definite role to play" (Ferguson, 1959: 325). This concept was eminently intended to describe four language situations prevailing in four areas in the world. The Arab World, Switzerland, Haiti and Greece. In each one there is a 'High' variety (H) of a language and another one of the same language that is considered as 'Low' variety (L). What is significant in diglossia is that these two varieties are in functional complementary distribution, i.e., each fits a context that the other does not. A few years later, a salient shift in the concept of diglossia emerged thanks to Fishman (1967) who extended the criterion of functional complementary distribution to a wider range of language situations, including, in particular, contexts in which the H and the L are genetically unrelated, as in Paraguay where Spanish is the official language used in formal settings, education, government administration and written material, and Guarani being the L variety used in everyday communication. Henceforth, varieties of unrelated language are involved and situations of 'bilingualism with and without diglossia' are studied (Paulston and Tucker, 2003: 343).

The Algerian diglossic situation is very specific on which Schiffman's[25] definition may be applied. He states that 'in some linguistic cultures, all speakers exhibit diglossic behaviour (i.e., use both H and L varieties in complementary distribution), while on others, only some members of the society do' (1997: 212) and "in many diglossic situations, only a minority or elite control the H domain successfully" (1997: 206).

[25] In Hudson (2002 : 05)

Although MSA and French are the H varieties to be used in formal and public domains in Algeria in opposition to AA and Berber as L, there is not an equal distribution of these two varieties among the members of the Algerian society owing to the promulgation of the Arabisation policy which has nonetheless slowed down the expansion of French and, all the same, failed to fully arabise people. Educated persons are the only ones able to use the H varieties (either MSA or French and sometimes both languages) in accordance with their social and educational backgrounds. Illiterate people or those who have not completed their education may not be able to use French and/or MSA appropriately[26]. For instance, if we take the radio or television as a formal context in which only MSA or French are normally used, it is inevitable to hear many Algerians, who are calling during a religious program in the Qu'ran channel where only MSA is to be employed, speaking in AA or Berber to the animator or religious men present in the studio, simply because they do not possess competency in MSA. The same thing happens during programs of the Algerian Radio 3rd Channel that are broadcast in the French language and in which many participants call and use the L variety (especially AA) instead of French, as a result of lack of proficiency in the target language.

In any case, it is not our intention to dig deep into the Algerian diglossic situation; we merely referred to it in order to introduce another phenomenon 'bilingualism' that characterises both the Algerian individual and the Algerian society as a whole. We assume it to be closely related to our investigation on the impact of French on the linguistic practices of professionals like physicians.

2.3.2. Bilingualism

It is an undeniable fact that the French language has deeply influenced the Algerian society until the present day. It is very noticeable that in many domains French keeps functional and dominant in both written and spoken modes as in sectors

[26] Similarly, a speaker who has not French as a language of instruction in higher education may not be able to use French appropriately enough.

of medicine, pharmacy, industry, computing sciences etc. Furthermore, Algerians include plenty of French words in AA and Berber dialects. These words are sometimes used with slight phonetic and morpho-syntactic adaptation to Arabic or Berber (depending on the regional and ethnic origin of the speaker) because they are said to have been borrowed and integrated to these dialects during the period of colonisation when most Algerians were illiterate. This explains their use by even elderly persons and people who are unfamiliar with French.

In some of these frequent words, the change occurs at the definite French articles 'le' and 'la' to the Arabic one /al-/; for instance, in Algeria everybody says /ʔBl-mikru/ or /ʔBl-pe-se/ 'le micro' or 'le PC' in French, to mean 'the computer' in English. /ʔBl-maGina/ 'la machine' in French and 'the machine' in English. /ʔBFFuwœr/ 'le joueur', in French, to refer to 'the player'. What is interesting, in this latter example, is the assimilation of the ʔBlqamarija consonant /l/ to the ʔBGGamsijja consonant [F] resulting in germination [FF] which is a particular aspect of the Arabic language. The same thing happens in the word /ʔBrradjo/ 'la radio'. Whereas, other words are kept as they are such as /lakriz/, /latSsj2/ or sometimes /latasjo/, /leblCk/ i.e., 'la crise', 'la tension', in French, to mean 'the crises, 'the blood pressure', in English, respectively. These are just a few examples of many words that show the strong influence of French on the way of speaking of Algerians, as put by Bouhadiba [(1998: 1-2) in Dendane, 2007: 68] "[French is] strongly implanted at the lexical level". Although many of these words have their equivalents in Arabic, Algerians continue to employ them so much in their day-to-day conversations that they are believed to be part of AA and Berber not French. So, if someone uses an Arabic word such as /ʔal-ħasu:b/ instead of /ʔal-mikro/ or /lCrdinatœr/ this will be conceived as either an ironic way to refer to this object or that the speaker is rather an arabised person /insa:n muʕarrab/ who has positive attitudes towards Arabic and who is demonstrating his skills in this language.

However, though the frequent use of these words reflects the strong influence of French on the linguistic behaviour of the Algerians, we have to believe that it is not an indicator of high degree of competency in French of most Algerians. The use of French is restricted mainly to some terms that refer to some objects that generally do not have equivalents in the local varieties or that are not known by the speaker, although, they may exist in MSA which is not used in the their everyday speech. e.g., the word /lSp/ or /lamba/ 'lampe' in French and 'lamp' in English, is often used though the word /miṣba:ħ/ exists in MSA. Other examples include the words like 'scanneur', 'radio', 'échographie', etc. Or some words and short expressions like:

Approval: c'est bon (it is alright), c'est bien (it is good), d'accord (okay), etc.

Negation: non (no), jamais (never).

Time and place indicators: à demain (see you tomorrow), à plus tard (see you later), ici (here), la-bas (there), etc.

Words to show respect and thanks: madame (madam), monsieur (sir), je vous en prie (I beg you), merci (thank you), etc.

It was aforementioned that French is not parceled out equally across the Algerian population. It is largely monopolised by the urban rather than the rural, the rich rather than the poor, the educated rather than the uneducated. Hence, many Algerians understand French but cannot speak it or they are not very fluent in it. Indeed, Algeria is considered as the most francophone of France's former territories[27]. But it is not characterized by homogeneous bilingualism since we can meet many people with different degrees of proficiency and 'bilinguality' in different parts of the country. Francis Britto (1986: 297) differentiates between 'homogeneous bilingualism' and 'heterogeneous bilingualism' as follows:

> If two languages operate in one territory for the same people, then the situation is called 'homogeneous' bilingualism, and if

[27] Algeria is not a member of OIF: The International Organisation of the Francophony

> the two languages operate in one territory for different people, then the situation is called 'heterogeneous' bilingualism.

The concepts of 'bilingualism' and 'bilinguality' have long been the focus of many linguists as they seem to be problematic when attempting to define them or apply them in a particular situation, because they are multidimensional and have to be approached as such, as Hamers and Blanc believe (2000: 06). In terms of a number of psychological and sociological factors, they define bilinguality as a state of an individual who has the opportunity to use more than one linguistic code for social communication. While bilingualism is the result of the spread of some bilinguality among members of a community "Either the community is composed of two groups speaking two different language as their mother tongue along with a small number of bilinguals speaking both languages" (ibid: 31).

One feature of the Arabic/Berber Algerian bilingualism, in which we can speak about two different groups, a minority group of the Algerian population is speaking one of the different Berber varieties in some areas throughout the country and a majority group speaking different dialects of Arabic "or a small number of both groups speaking a third common language, used as lingua franca; or, as in the case of exogenous language, some members of the community speak a second language that has no few native speakers in the community" (ibid).

This second part of Hamers and Blanc's definition of bilingualism fits to some extent the actual situation of Arabic and French or Berber and French bilingualism. For some ethnic and political reasons, many Berber speakers prefer to speak in French rather than in Arabic with the arabophone Algerians who do not speak Berber but speak French. Here French is used as a lingua franca. Or to a lager extent, this may be met when two persons from two distant regions of Algeria or two countries of the Maghreb are talking together and feel some constraints to use French instead of their mother tongue varieties to facilitate communication. Beyond this, French is present in Algeria as a result of factors that have already been indicated in the previous sections.

Hence, a number of Algerian individuals are bilinguals and Algeria is said to be characterized by societal bilingualism.

However, this may seem troublesome if we borrow Fishman's (1971) viewpoint of societal bilingualism in which he explains that no speech community needs two languages for the same function, simply because proficiency in one language or another is tightly related to the function it serves. Moreover, balanced bilingualism among members of a society would be very rare. He argues that "Bilinguals who are equally fluent in both languages (as measured by their facility and correctness overall) are rarely equally fluent in both languages about all possible topics" [(Fishman *et.al.*,1971) *in* Beardsmore, 1986:09). Accordingly, bilingualism serves some social, personal, professional need and differs in degrees of proficiency from one person to another and from one community to another. Besides, Fishman's definition suggests that it would be unlikely to find an ideal balanced bilingual individual or an ideal balanced societal bilingualism. Beardsmore (ibid) believes that balanced bilingualism occurs when "a speaker's mastery of two languages is roughly equivalent and where this ability may match that of monoglot speakers of the respective languages".

In Algeria, the off spring of French schools during the colonial and post colonial period may be qualified as balanced bilinguals, mastering to a higher extent French and their mother tongue (AA or Berber). They are able to produce long stretches of speech in both languages and in some situations they mix them within a single conversation, under some rules, whereas in the following generations, one may rather meet monolinguals or unbalanced bilinguals who possess more competence and fluency in their mother tongue (i.e., their dialects and of course not MSA) and far less competence in French. Here, a level of competence, in the French language, varies along a continuum from a very high proficiency to a very low or no proficiency at all.

Yet, other dichotomies may be referred to, such as coordinate and compound bilingualism as opposed to early and late bilinguals. On the basis of Lambert's (1972a) assumption of compound bilingualism, Beardsmore (1986:27-28) suggests their

conception of early bilingualism that develops during "the early formative years of the child's linguistic development" when what Chomsky refers to as LAD[28] is still at work, and both parents are bilingual and speak to their child in both languages, i.e., the child is brought up in a bilingual environment and acquires two languages separately as a first language (2×L1). However, if bilingualism starts in the period after the child's age of more or less 11 years, a kind of co-ordinate bilingualism will, then, occur. After one has already *acquired* a first language L1 during the early childhood, a second language L2 will be *learned* and added to his/her linguistic repertoire, usually in a classroom environment. As far as the mental processes, Beardsmore (ibid) assumes that if one accepts this model, interference between the two linguistic systems would be minimized in the compound bilingual's behaviour and it is likely to be experienced in the coordinate bilingual one.

As regards the Algerian situation, both compound and coordinate bilinguals do exist among the young generations. But, the majority is of the second type, since they did not start learning French at school until the 4th primary grade[29], after having already acquired their mother tongue at home. But, they will be exposed to more French until they reach university, and only if they choose to study a scientific discipline or French studies. Most of them do not possess even an average mastery of French. Nevertheless, a minority of the Algerian children are compound bilinguals, those whose parents are themselves bilinguals and prefer to raise them using both AA or Berber and French at home. Furthermore, some of them prefer to send their children to some French institutions that exist in Algeria, to serve cultural exchange purposes, or schools of foreign languages where they can learn and practice different activities such as reading, singing, doing drama, etc. in French. To illustrate we may refer to the different French Cultural Centers (CCF) in different Algerian cities like Algiers, Oran, Constantine, Tlemcen. Another example is La Chapelle of Sidi Bel Abbes. Besides, from independence to 1999 there were still some francophone schools in which all the

[28] Language Acquisition Device
[29] After the recent educational reforms, from September 2006 to this day, French is taught since the 3rd primarily year.

subjects were taught in French. But these schools were soon closed after president Abdel-Aziz Bouteflika became head of the state in 1999.

Another distinction that fits the Algerian context is the one put forward by Romaine (1999, 61) who uses the terms 'elite' and 'folk' bilingualism to differentiate between what circumstances and motivations lead "those to become bilinguals out of choice, often for increased prestige, and those who seek to become bilingual out of necessity, often for survival" (Hall *et al.*, 2011: 189).

2.3.3. Domains and language choice

Language choice has been studied from different perspectives which have tried to offer some explanations to the constraints under which a speaker makes certain language choices. In the current research, we attempt to present an initial description of language use in the Algerian healthcare settings were French is widely used.

From a sociolinguistic perspective, in multilingual societies, the use of languages in institutional contexts can be described through the notion of 'domain' proposed by Fishman (1970). He suggests that a speaker is likely to choose from his or her linguistic repertoire, a language variety that seems to be more appropriate than any other in a specific context. Fishman (1972: 15) asserts that " 'proper' usage indicates that only *one* of the theoretically co-available languages or varieties *will* be chosen by particular classes or *interlocutors* on particular kinds of *occasions* to discuss particular kinds of *topics*."

This implies that there is a set of factors applicable to all multilingual settings and that contribute to regulate and predict suitable language choices. They allow speakers to use different language varieties with different people in different contexts and for different purposes. Accordingly, Fishman's concept of domain is distinguished by three criteria: the participants, the location and the topic (Spolsky 2009: 03). Besides, Fishman considers 'topic' as a regulator of language use in multilingual

settings. He shows that there exists a close relationship between domain and topic in understanding patterns of language choices when he states that:

> By recognizing the existence of domains, it becomes possible to contrast the language of topics for individuals, or particular sub-populations, with the language of domains for a larger part, if not the whole, of the population. (ibid: 19)

In Algeria, French is favored in some formal domains of scientific education and employment such as technical, financial and medical fields, due to the functional nature that this language still holds, in spite of all the governmental attempts to restrict its use. Unexpectedly, it also invades some L domains, such as friendship and family in which French is used instead of AA or Berber when intimate topics are discussed. However, this mainly happens when members of these groups engage in topics that require the use of French as in speaking about computing services and systems, for instance, or indeed medical matters.

In healthcare setting, French continues to completely dominate instruction; as a result, doctors feel more comfortable speaking to each other in the language in which they have acquired medical knowledge. Furthermore, the choice of French to discuss medical matters enables doctors and proficient French-speaking patients to express their thoughts in an appropriate manner, and to talk informatively about the symptoms, the diagnosis and the treatment of the illness. This makes us doubt that an effective communication could occur when doctors are confronted with patients lacking proficiency in French. In contrast to modern medicine which connotes the use of French, Traditional medicine is characterised by the use of Arabic.

Conclusion

Due to multiple factors, French is used to varying degrees by Algerians. Accordingly, one might say that Algeria is characterised by an unbalanced bilingualism at both micro and marco levels. This situation generates some

communication problems between a speaker of French and another one who lacks proficiency in it, especially, in some contexts such as medicine, where French imposes itself, since the birth of modern medicine in Algeria, as the language of science. Hence, it is inevitable to suffer from failure in communication between professionals and non-professionals.

Chapter three: Doctor Patient Communication and Linguistic Barriers

3.1. Introduction

The primary purpose of this chapter is to sketch the followed methodology in this study. It attempts at testing our hypotheses through mixed research to increase accuracy and validity. It is also concerned with analyzing and discussing the obtained results in detail.

3.2. The research site

Sidi Bel Abbes (SBA henceforth) is a city in the Northwest of Algeria and a capital of its province of the same name. SBA occupies a strategic position as it is well connected by roads and railroads to other 'wilayas': Oran in the North, Ain-tmouchent in the Northwest, Mascara in the Northeast, Tlemcen in the West, Naama and El-Bayedh in the South and Saida in Southeast. It is located at 470 m of altitude in a centre of a vast plain. The city of SBA is considered as a dynamic commercial and industrial centre. Its activities are mainly focused on agriculture machinery, electrical equipment, dairies and commerce. These economic and geographical factors as well as urbanisation contributed to a significant inflow of population from the rural areas and the surrounding 'wilayas'. It has a population of 220000 inhabitants according to 2009 consensus. This makes of it the second largest city of the West of Algeria in population.

Our research was conducted at the hospital of SBA and some few private offices in the same city. The civil hospital of SBA was built in 1936 during the colonial period. Soon after independence in 1962, it was converted to a health sector caring for populations of the Western and Southwestern regions of the Orania, with the help of a foreign medical cooperation. From 1984, the health sector of SBA obtained a university vocation. In 1987, under the decree 86/305 of 16/12/1986 the health sector of SBA became a university hospital (CHU[30] henceforth). Actually, it consists of 32 departments with a total of 634 beds.

[30] This acronym stands for the: Centre Hospitalier Universitaire in French to mean the University Hospital Center

On the 6th June 2011, a new department, linked to CHU of SBA, was inaugurated 'The Specialised Consultation Unit' (SCU). According to its head, this department is the unique in the west of Algeria. In this unit all the specialities of medicine are available. It offers free specialised check-ups to out-patients from all the West of Algeria and it helps reduce congestion at the hospital as it covers post-operative consultations.

3.3. Mixed research approach

In order for any scientific research to stand more reliability and to be objective, it should follow a certain research methodology paradigm; it is either quantitative approach, qualitative approach or a mixed approach. Quantitative research relies mainly on the collection of data through structured methods such as structured observation, questionnaires, surveys and interviews in which basically close-ended questions are used. On the other hand, qualitative research uses " research questions and semi-structured methods such as open-ended and in-depth interviews, ethnographic field notes, focus groups, open-ended questions on surveys, and participant observation."(Sarbani Kattel, 2010: 25). The third type, mixed research, also known as triangulation, involves characteristics of both quantitative and qualitative paradigms. It uses elements, techniques and concepts of both methods in a single study so that diverse perspectives cast light upon the topic under investigation. Indeed, triangulation in research is by no means aiming at replacing either of qualitative or quantitative approaches. Rather, it attempts to draw from their strengths to minimize their weaknesses in a particular study or across studies (Johnson *et al*., 2004: 14-15). In addition, Rossman and Wilson (1985, 1991) assert that using mixed approaches has three broad advantages. First, it allows the researcher to inspect and confirm data through the use of multiple research perspectives and tools; second, to elaborate and develop a thorough analysis which yields more valuable details; and third, to improve the researcher's awareness and to provide a better insight to deal with conflicts and paradoxes between the two data sources. (*in* Vitale *et al*., 2008: 90).

3.4. Field work

Some preliminary data was gathered before fieldwork was carried out. This occurred through observation, experiences and personal stories told by some family members and friends. Our field work in medical settings was carried out from mid-March to mid-April.

The task of a researcher, during data collection, is to stay close to his or her informants, i.e., the researcher should spend a period of time in the environment where the phenomenon in question is taking place. Aikhenvald (2007: 5) emphasises that an ideal field involves "observing the language as it is used, becoming a member of the community, and often being adopted into kinship system" (*in* Chilliah *et al.*, 2011: 7). In other words, fieldwork is a personal experience in which the researcher lives with the informants and learns their social customs and behavior through various types of data collection methods.

To accomplish our study, we performed different tasks. First, in order to obtain a legal permission from the Head of the Pedagogical Activities (HPA) of CHU of Sidi Bel Abbes (SBA) to allow us to conduct our research in the hospital, we obtained a permission request letter from the head of the English Department of Tlemcen University. At the beginning, the assistant director granted us a permission (See Appendix D) to conduct our research in three departments that were Internal Medicine, Endocrinology and Diabetes and the department of Emergencies for a period of time of 10 days in each department starting from the 19th march 2012. However, one week later we were withdrawn the permission in the third service as its head refused to allow us carrying out our study there claiming that very little communication occurred at emergencies and that doctors were always very busy to provide patients with immediate care so they could barely talk with them. Another doctor who was also present said that emergencies were not the ideal service to undertake a research on communication. But of course if we were allowed to conduct research there and hold some observations in a high pressure and stress work service such as emergencies, this would be very beneficial to yield evidence about communication failure and its major

causes. Hence, the HPA granted us another permission in an outer department, SCU, and allowed us to conduct our research in all its services. The majority of the interviews with patients were conducted in this department when they were waiting for their turns or for their doctors. Other interviews with patients were carried out in the private sector in three offices whose physicians accepted to interview their patients if the latter accepted too. They were two gynecologists and one gastrologist, while questionnaires and interviews with doctors took place in three areas, the hospital, the SCU and in some private physicians' offices. Besides, access into the hospital and the SCU gave us the opportunity to make a number of relevant observations and to record significant information on patterns of language use in a health care setting, in our research diary. Additionally, some questionnaires were administered online via Facebook and emails.

2.3.4. Sampling

Sampling refers to the process by which the researcher selects his or her informants from a large population of interest. The sample population should be representative enough so that the sample study results can then be generalised to cover the entire population.

In our study, the sample population consisted of individuals who were selected from a larger group comprising physicians and resident physicians practicing in CHU of SBA and out-patients or their caregivers who came to the SCU for a medical check-up. There were also informants who were drawn from within and outside CHU of SBA such as nurses, and physicians practicing in their own offices and some of their patients in addition to those who were contacted via internet. Sampling can be either random or non-random.

3.4.1.1. Random sampling

Random, also known as probability sampling, refers to a procedure in which informants are selected in a systematic way so that each element within the whole population has an equal probability or chance to be selected. Random sampling is used

in highly statistical studies, where the researcher needs to be equipped with a list of all the members of the large population, referred to as 'a sampling frame', in which population members are arranged into different sets according to their age, gender, social class, etc. Then, the researcher chooses randomly the informants from each group. In the current research, it was impossible for us to use a random sampling as no population member was available for us to establish a sampling frame neither of doctors nor of patients.

3.4.1.2. Non- random sampling

Unlike probability sampling, non-probability or non-random sampling does not assure that all members of the population have equal chances to be included in the sample population. This type of sampling is mostly used in researches that follow ethnographic survey, qualitative and mixed methodologies. In this regard, Bulmer and Warwick (1993: 97) argue that 'in academic disciplines such as sociology, anthropology and political sciences non-probability sampling is more common than probability sampling due to 'indefinite populations, unavailable sampling frames, small budgets, lack of time and pressure for results.''. For these reasons we felt under the obligation to use a non-random sampling. It allowed us to approach the closest individuals to serve as informants in our investigation.

3.5. Methodology and research instruments

3.5.1. Questionnaire survey

The primary source of data that was gathered in this study was elicited through two questionnaires that were conducted amongst patients and physicians in both public and private service sectors. Each questionnaire was organised to comprise two sections A and B. In the two questionnaires, section A included questions about the social and linguistic backgrounds of respondents whereas section B asked questions that yielded general information on the use of language in medical settings.

3.5.1.1. Questionnaire for patients

A questionnaire (See Appendix A) written in MSA[31], was administered to patients and some caregivers in a non-random way. But, we used a researcher-completed questionnaire approach in which the researcher asked orally the questions to the informants and recorded their responses. This approach was used because patients might have different social backgrounds and might not all be able to read, write or even understand MSA. It allowed us to paraphrase or translate, when necessary, either to AA or to French to solve problems of misunderstandings, to ask for additional details that appeared to be valuable or that helped us confirm suspicion and deal with paradoxes, and finally, to redirect the informants' answers in case the patient provided irrelevant data to the study.

Sixty questionnaires for patients were printed. 5 patients did not accept to take part in our research (2 women and 2 men in SCU, and a woman in a private office). 2 patients could not finish the questionnaire because their turns of examination came. Of course these questionnaires were not taken into consideration. So, out of 60 questionnaires that were distributed, 53 ones were completed. This represents a return rate of 88, 33%. 22, 64% corresponds to 12 questionnaires to which patients in the private offices replied. 77, 35% corresponds to 41 questionnaires to which patients SCU replied.

3.5.1.2. Questionnaire for doctors

A second questionnaire (See Appendix B) was designed to elicit data from doctors at both public and private service sectors i.e., CHU of SBA and medical private offices, respectively. Initially, we intended to be present while the respondents filled the questionnaire, in order to further discuss problems of communication and linguistic barriers with them. However, we were surprised to meet uncooperative and unwilling doctors, at the private sector in particular, to take part in our research. Some doctors claimed that the questionnaire was too long and they could not give immediate

[31] The reason behind the choice of MSA was that we needed a variety that could be used in a written form and at the same time of a large-scale accessibility among laymen such as patients.

responses due to their busy schedule. For fear that an insignificant number of doctors could fill out our questionnaire within the fieldwork period, we decided upon a respondent-completed questionnaire approach. This approach allowed us to put the respondents at ease. However, during the first days of our fieldwork we had noticed that little importance was given to our research. Thus, in order to avoid a possible failure in data collection, another technique was used. A number of questionnaires were sent to doctors via emails and the social networking service 'Facebook'.

Given that in Algeria, medical sciences are taught in French since the opening of medical schools in Algiers during the colonial period in 1833 (See section 2.2.3.1.) we assumed that a questionnaire written in French language would be easy to understand and to complete. Nevertheless, respondents were encouraged to use Arabic to make illustrations of words and expressions used by the patients. Actually, there was a fear that few questionnaires would be returned, so we distributed a large number of questionnaires. A total of 120 questionnaires were distributed, 20 were sent via internet out of which 2 were filled and sent back. This represented a rate of 1, 66% of the whole number of questionnaires. On the other hand, 100 questionnaires were handed in both private and public sectors. Only 58 questionnaires were returned. They represented a rate of 48, 33%. Out of the 58 questionnaires 47 ones (39, 16%) were completed and returned by doctors and residents in the CHU of SBA and 11 questionnaires (9, 16%) were filled and returned by doctors in the private sector. All in all, 60 questionnaires were completed and returned.

- **Pilot test**

In fact, we had worked on an initial questionnaire that was tested over 10 doctors. It contained more questions as far as the social and linguistic backgrounds and some comment-on questions in the second section. However, we noticed that doctors felt much embarrassed to reveal their age, speciality, and town of origin, although we reminded them that the questionnaire was completely anonymous and information would be treated confidentially, as it was clearly mentioned in the cover memo. It was also observed that no doctor answered the comment-on and the open-ended questions.

Therefore, some questions were dropped, others were modified or fused with others. Instead of the comment-on and the open-ended questions, we asked doctors to merely provide examples of words and expressions. This gave our questionnaire a quantitative aspect. Indeed, we attempted to compensate for the lack of qualitative data by using other methods

3.5.2. Observation and participant observation

The current research falls largely under an ethnographic approach. It combines observation and participant observation of language use in healthcare settings, through some unstructured interviews with patients and doctors. This aimed at validating the quantitative data, in particular. The researcher observed language use and interactions in administrative offices, the hospital hallways, and consultation rooms. Nonetheless, it was impossible for us to keep an eye on everything due to time pressure and the many tasks we had to accomplish. In addition, the hospital's environment was of a crowded and noisy nature. It prevented us from receiving clear data, in spite of our use of an audiotape recorder. Thus, probably, some aspects of language use had passed unnoticed.

Internet was also a source of secondary data. Some data was gathered through some Algerian discussion forums of medicine, in which questions on the language of instruction were already raised by students of medical sciences. Besides, the forum discussions and the focus group[32] technique had inspired us to hold the issues of communication and linguistic barriers in Algerian healthcare setting on a medical page on Facebook. One advantage was that it allowed us to gather some valuable qualitative data over a relatively short period of time.

[32] Focus group discussion is originally designed as a research technique in marketing. It became a popular technique of researches in many disciplines in social sciences. David L Morgan (1996: 130) broadly defines focus group as "a research technique that collects data through group interaction on a topic determined by the researcher".

3.6. Research findings and analysis

The aim of this section is to present, analyse and interpret the data that we were able to obtain by using the research tools that we have described in the above sections. Both questionnaires have used to large extent close-ended questions that will be analysed statistically. This allows the researcher to reach a high level of neutrality and exactness. Tewksbury (2009: 39) emphasises that "quantitative research is typically considered to be the more "scientific" approach to doing social science". Yet, it also takes into account the qualitative data that is analysed and interpreted to make sense of the gathered numerical data and to solve ambiguities.

3.6.1. Results and analysis of the patients' questionnaire

3.6.1.1. Section A (The social and linguistic background information)

In this part, the questions were intended to elicit basic information about gender, age, region, educational level, occupation, mother tongue, frequency of language use as well as the level of comprehension of French which is assumed to be one of the obstacles for an effective D-P communication. It is through these indicators that our informants will be examined throughout this study.

3.6.1.1.1. Gender

Out of 53 informants 33 were females that made up 62, 26 % of the sample population and 20 males representing 37, 73%.

Since our first day of fieldwork we have noticed that the number of females in the waiting halls at both public and private sectors far exceeded that of males. This was also confirmed during the consultations which we could attend. Doctors received many more female patients than male ones. A female doctor told us that women are more likely to fall sick than men due to life harshness, pressure, social problems and their multiple responsibilities as a wife, mother and housewife. While another male doctor said that there did not exist any gender difference in health condition. He added that both had an equal probability of having health problems except that on the whole

women complained more than men about their health and they were more used to having check-ups than men. Another explanation of the fact that females outnumbered males might be that, apart from being a patient on their own right, women have other roles in the Algerian society. A woman has the role of a healthcare giver either as a mother to a sick child or as a daughter of an old parent. It is important to mention that their answers were taken into account unless we were sure that it is the health giver who talked with the doctor on behalf of the patient

3.6.1.1.2. Age

In any sociolinguistic research the age of the informant is very important. The research result can be biased if the informant is very young or very old because they may give meaningless or irrelevant responses to our research. Accordingly, children and very old people were not selected as part of the sample population. Informants have been divided into five age categories as shown in Figure 3.1.

Table 3.1. Patients' ages

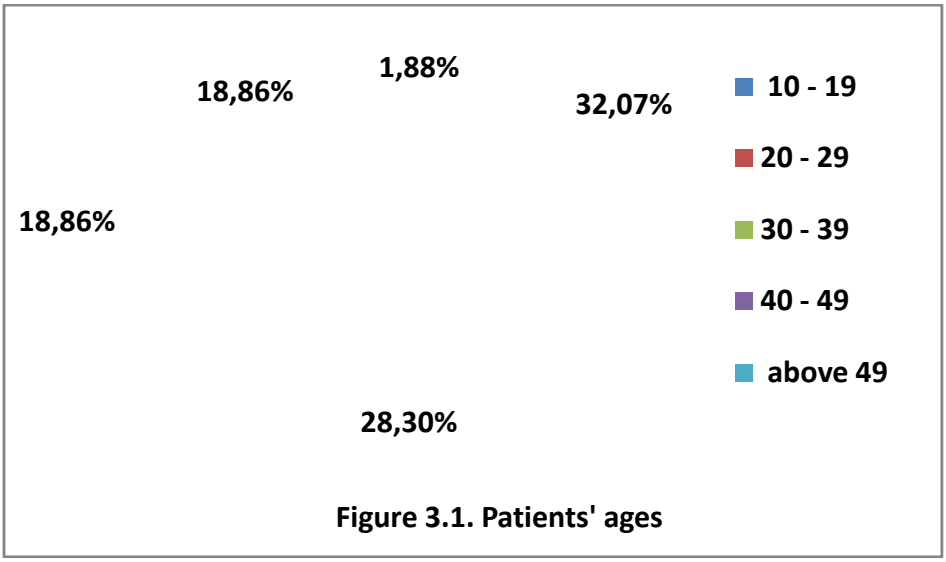

Figure 3.1. Patients' ages

3.6.1.1.3. Area of residence

This question asked the informants about their place of residence to determine whether they came from rural or urban areas and if they came from other further Algerian regions. The place of residence can be meaningful especially as one's language variety differs from one place to another. One may come across some unintelligible words and expressions that are not used in his or her place of residence.

There were informants from SBA, others from neighboring villages such Telegh, Sfizef, Ibn-Badis, Mezzaourou, etc., neighboring cities such as Oran, Ain Tmouchent, Saida, Maasraca, and even from farther Eastern Algerian Towns such as Batna, Annaba and Constantine.

Table 3.2. Area of residence

3.6.1.1.4. Educational Level

Asking a question about the highest level of education is an important indicator of the social status of the informant.

Table 3.3. Educational level

The results demonstrated that no informant claimed that he / she did not attend any education at all. This can be explained by the fact that very old people were excluded from our research for reasons that were already given in the age question. Besides, in Algeria, education has been compulsory since independence for all children from age 6 up to age 16.

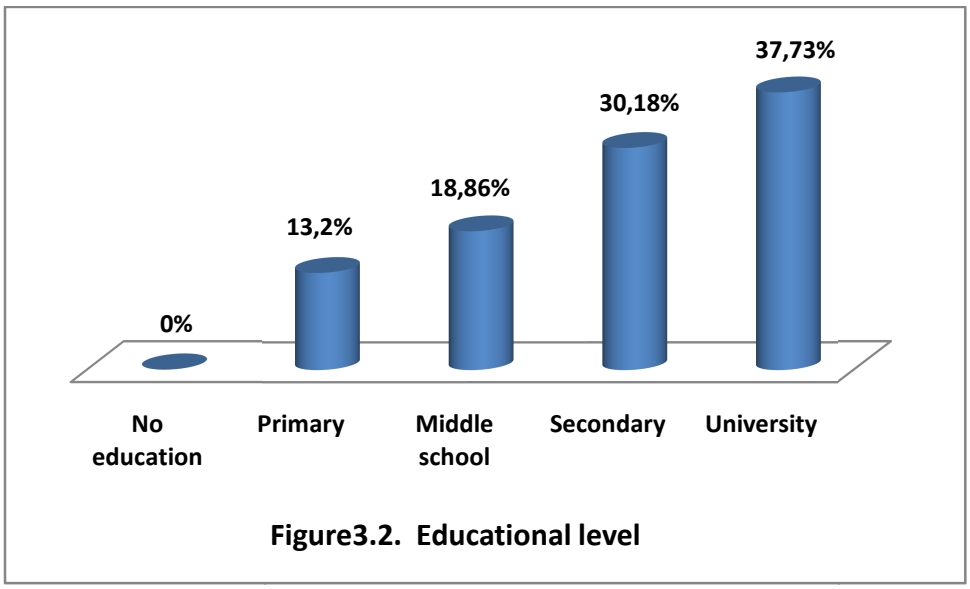

Figure3.2. Educational level

On the other hand, we have noticed that out of the 7 informants with a primary level of education 5 informants i.e., 71, 42 % of the whole number, were over 50 years old who could receive a minimum education during the colonial period. One informant was a female in the 40s and another one in the 30s from a far rural area Mezaourou in which middle and secondary schools have just recently been built. They might have stopped their education since it was not possible for them to move to the neighboring village 'Telagh' to carry on their education.

As far as the informants who attained middle school, 6 representing a rate of 60% out of 10 informants came from rural areas. Substantially, a higher rate of secondary education attainment was recorded 30, 18% this could be directly linked with high percentage of informants coming from urban cities (See table 3.2. that shows that 47, 16% of the informants were from SBA and 24, 52% were from other cities.)

where secondary schools have long been available and the low rate of success in the baccalaureate exam which could not exceed 37, 29%, in Algeria, in the past years until 2005.

Finally, 20 informants i.e., 37, 73% of the total sample population had either a university degree or were university students. The majority of these informants were young, under the age of 39 years old. 14 informants (70%) came from the city of SBA or other urban cities, while 6 informants (30%) were from rural areas.

Indeed, the level of education has a relationship with competency and frequency of use of linguistic varieties. Higher educational level, normally, entails high level of competency of MSA and French. However, this correlation should not be taken to mean that every Algerian with a high level of education is competent in both standard varieties, French and MSA.

3.6.1.1.5. Occupation

Occupation is an important component to reflect the socio-economic status of the informants. The following results (Figure 3.3.) demonstrate that the majority of our informants fell in the two first categories i.e., unemployed and civil servants whose income is not very high.

Table 3.4. Occupation

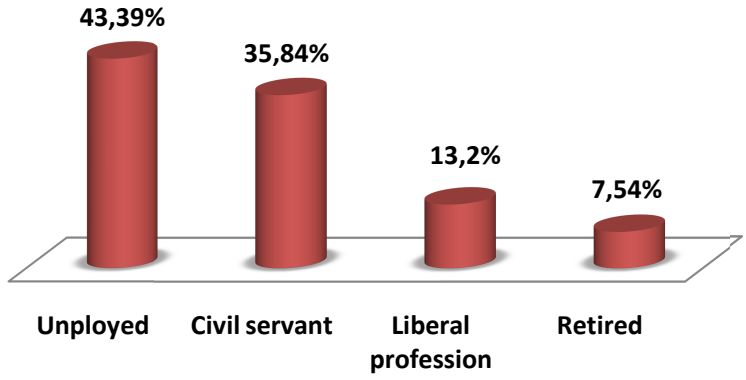

Figure 3.3. Patients' occupation

It is also noted that the type of occupation of the informants is associated with their level of education. For example, unemployed informants recorded the highest rate, that is, 43, 39% out of which 65, 21% of these informants did not achieve university level. The remaining 34, 78% of the unemployed informants were still university students. The second highest rate was recorded by civil servants, 35, 84% whose income generally varied between low and average. Next, come informants who work on their own terms (liberal profession) with 13, 20%, some them appeared to have good incomes such as merchants and businessmen while others had small jobs such as builders and seamstresses. Among the 4 retired informants, 3 were former teachers and 1 was a former bank director.

3.6.1.1.6. Mother tongue

SBA is a melting pot of Arabs, Kabyles, Beni-Mzab and other Berber tribes. This question helped us in identifying the ethnic group of our informants. It first aimed at checking if there were a large number of speakers of Berber and whether they found difficulties in communicating with non-speakers of Berber.

Table 3.5. Mother tongue

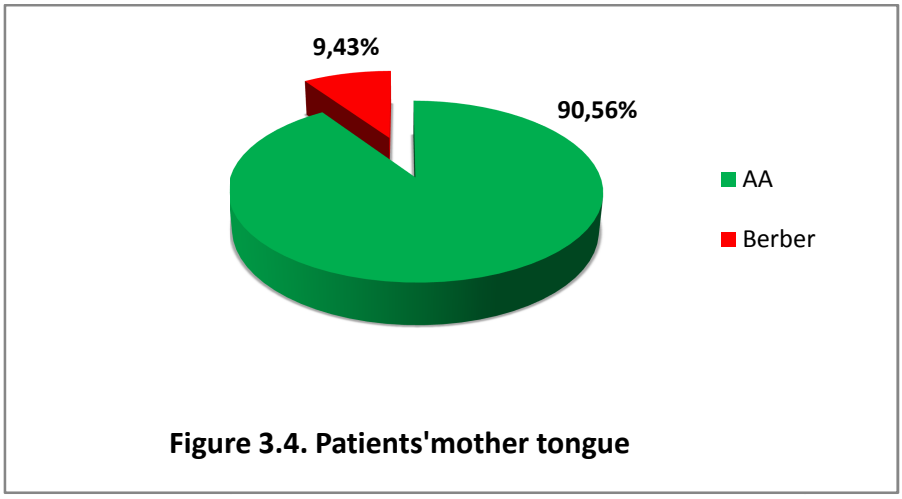

Figure 3.4. Patients'mother tongue

The majority of the informants used AA as a mother tongue representing a rate of 90, 56%. However, even a small number of those who claimed that Berber is their mother tongue and that they used it mainly at home and with other Berbers, said that they had no difficulty speaking AA like a mother tongue because they were born and grew up in SBA. Some of them said that even their parents were born there. Therefore, they never encountered any problem of communication with non-speakers of Berber.

3.6.1.1.7. Frequency of use of languages

Patients were asked about how often they used MSA, AA, French and Berber in their day-to-day conversation within four categories 'Never', 'Sometimes', 'Often' and 'Always'. The following figure exposes the findings.

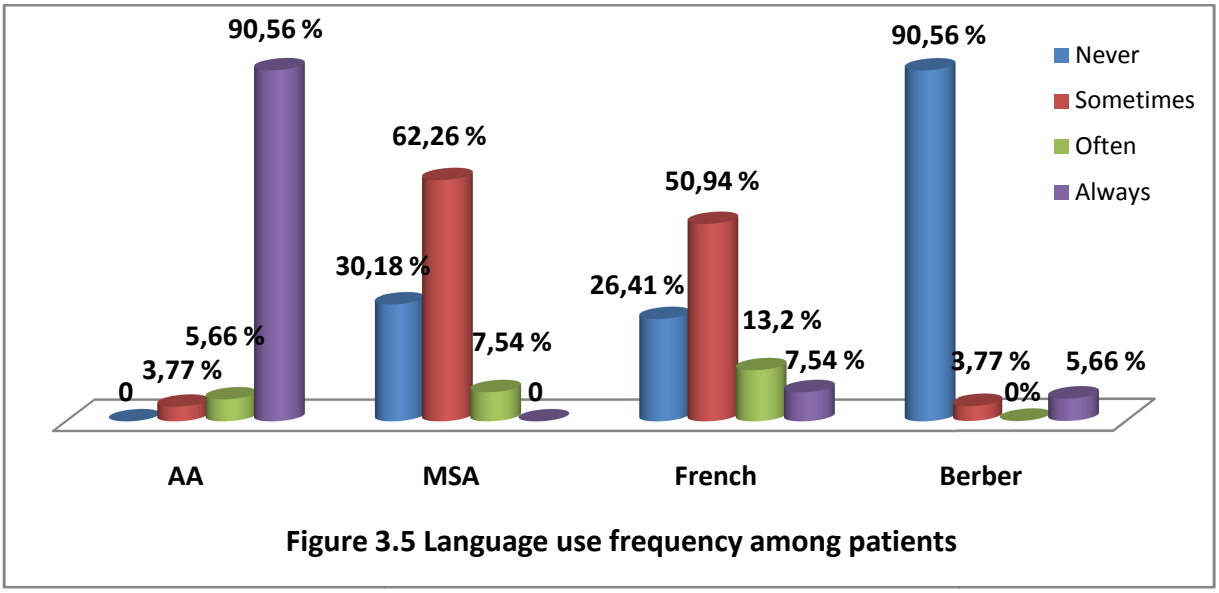

Figure 3.5 Language use frequency among patients

Table 3.6. Language use frequency among patients

To discuss the result we could obtain in this table, we used a ranking system. Rationally speaking, a variety is said to have a high degree of frequency of use unless it is always used by the majority of speakers. If we consider the score of each variety, we notice that AA recorded the highest percentage of use in the category of 'Always' with a rate of 90, 56% followed by French with only 7,54%. These results will be compared with those of doctors that will be presented in the next section (See Figure 3.21.) to check differences in the frequency of language use between doctors and patients.

MSA

In the case of MSA, the 'Sometimes' category obtained the highest rate 62,26% which is consistent with the fact that Algeria is characterised by a diglossic linguistic situation where MSA is the H variety which is not used everywhere. Some informants, especially teachers, said that they used it at work. Other housewives stated that they used it during lesson revision with their children. Another patient said it is only used for jokes and to make fun with people. Obviously, no-one said he/she always used MSA.

AA

The 'Always' category of frequency obtained the highest percentage use of AA, that is 90, 56%, who were obviously the informants whose mother tongue is AA as the same percentage was recorded in the previous question concerning the mother tongue of the informants. Only Berbers said that they either sometimes (3,73 %) or often (5,66%) used AA in their everyday conversation. No one said that he/she never used AA.

French

As in MSA, when the frequency of French use was worked out, the highest rate was achieved by the 'Sometimes' category but with a considerably lesser percentage (50,94%). French is no one's mother tongue; it is neither used in all formal settings nor thoroughly mastered by the whole Algerian population. In contrast, only 7, 54% of the informants said that they always used French in their daily conversations and 13, 20% said that they often used it. The informants who selected the last two categories belonged to the educated generation above 50 years old, some of them were Berbers and the other young individuals told us that they grew up in families that used mainly French at home. But, supposedly, they meant they always use French mixed with AA or Berber.

Berber

The small rates that were recorded in the three categories 'Always', 'Often' and 'Sometimes' can be explained by the little number of Berberophone speakers who responded to our questionnaire. Unlike French, which is not the mother tongue of any Algerian but used by many Algerians in varying degrees, the majority of the population 90,56% said that they never used Berber since this variety is reserved mainly for its native speakers. A question may be raised here, but fir which we have no answer: why do berberophones speak AA and the converse is not true?

3.6.1.1.8. The ability to understand French

Our questionnaire included a question about the ability to understand French, a language that we hypothesise is causing a linguistic gap between doctors and patients. The following figure exposes the obtained results.

Table 3.7. Patients' self-assessment of understanding French

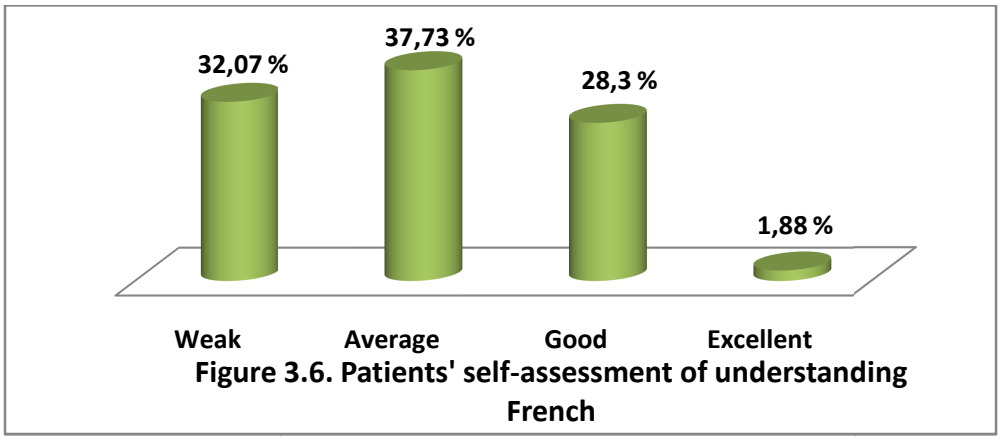

Figure 3.6. Patients' self-assessment of understanding French

Asking the question about the ability to understand French can offer significant evidence on the existence of a linguistic gap between doctors and patients. But this question, in particular, had to be treated with caution as it was based on a self-assessment of the ability degree of understanding French. Informants could give subjective answers as people may wish to appear to possess the ability to speak and understand a foreign language like French, which is a symbol of modernity, education and higher social status. So, the informants were first sensitised on the importance of objective answers and the negative impact of subjective ones on our research. We could also use observation and the previous obtained information to inspect whether we could trust their answers or not. In addition, we used French from time to time to talk to them or ask them questions to check their real level of French. Accordingly, 3 informants were re-ranked from the good level to the average level and 2 informants

were moved from the average to the weak level because it was apparent that their answers did not reflect their real level. Only 1 patient ranked himself as possessing an excellent level of understanding. We trusted him because he was a man above 60 years old, a former director of a bank and who held a Doctorate in economics and finance. In fact, he used French to answer our questions.

3.6.1.2. Section B (General information on language use in medical setting)

This section includes both close-ended and open-ended questions. It aimed at eliciting both quantitative and qualitative data from patients.

3.6.1.2.1. The patient health problem

The first question in this section was about the reason for being in the hospital i.e., what health problem the patient had. We wanted to see if the patient knew about his or her illness and health condition. This also allowed us to know what kind of information and explanation doctors provided their patients with. Although patients did not come to the SCU for the first time and each patient received regular monitoring by the attending doctor, findings showed that 50, 94% of the sample population could not give clear explanation of their illnesses.

For example, an informant, a male patient whose age was above 49 years old told us:

Patient: /ʕandi Guqq fBrragba/ (I have a fissure in the neck)

Researcher: /kifaG Guqq fBrragba/ (What is a fissure in the neck?).

Patient: /tBwFaʕni/ (It hurts).

Researcher: /Bṭṭbib gallBk fiha Guqq/ (It was the doctor who told you that it has a fissure?).

Patient: /wa:h/ (Yes).

It was clear that the patient did not know exactly what the doctor meant by the word /Guqq/ neither could we understand whether it was referring to a muscular or a

cervical problem. Another male patient in the 40s said that he had a neurological disease that he did not know what it was. One strange answer was given by a rural female patient in the 40s. She said that she suffered from *sinusitis* and she used the French word 'sinusite'. When we asked her if it was the doctor who used that word to tell her about her problem she said 'yes'. Then, when we asked her about the meaning of the word 'sinusite' she replied that she thought it was /Gaħma fBnnif/ i.e., *having a grease in the nose*, in English. This is completely wrong because sinusitis refers to 'the inflammation of the paranasal sinuses which may be due to infection, allergy or autoimmune issues.'[33] We can infer that the patient did not ask her doctor about the meaning of the word or to explain her problem. A year ago, in the secondary school were the researcher works, a teacher had a similar problem and she was told by her doctor that she suffered from sinusitis. Instead of asking the doctor she was asking her colleagues at school about its meaning.

During the process of observation at the consultation rooms we noticed that patients rarely asked questions or for further information to their doctors. Patients are usually passive and communication between patients and doctors was neither dynamic nor circular. It was always the doctor who initiated the conversation by asking namely close-ended questions to which patients replied either by 'yes' or 'no'. A lot of informants answered to this question by using, simply, names of the body parts or the organs that were diseased without knowing exactly what was wrong with these organs. To illustrate we mention some of the words that patients used: /fija Blgalb/ (I have the heart), /fija BlkolT/ (I have the colon, the large intestine), /fija lestoma/, (I have the stomach) /fija Bṣddar/ (I have the chest), /fija Blgwajem/ (I have the arms and legs) etc. There were patients who knew the name of their illness but not the type such us /sBkkur/ or /lBhluwa/ for both types of *diabetes*, /Blʕubraʃ/ for both *underactive* and *overactive thyroid.* Yet, other patients could not answer this question because they did not know their problems.

[33]Source : Wikipedia

On the other hand, when we met patients who knew well their diseases, it was mainly in French that they described it. For example, a university student young girl in the 20s said in French 'J'ai un problème au genou, il est gonflé. J'ai une sorte d'arthrose.' (I have a knee problem, it is swelling. That's a kind of *arthritis*'. Then, she said that it was due to 'lupus' (also called '*lupus*' in English) a disease that she was suffering from when she was a little girl. When we asked her about the meaning of that word, she switched to French once again 'c'est quand il y a moins de globules blancs dans le sang' i.e., to have a low white blood cells count. Her answers were checked in the internet and it turned out that she was right. Lupus refers to an autoimmune disease in which the body's white blood cells are attacked. This results in inflammation and tissue damage, lupus, commonly, causes arthritis, pain, and swelling in the joints especially in the knees.

A Minority of the informants used MSA to name their diseases and we noticed that its use was very fruitful in helping them understanding their illnesses. For instance, a male patient in the 40s who worked in a middle school in a rural area said that he had /qurħ/ (an *ulcer*,in English). Then, he added /ʔalmultahib ʔattaqaruħi:/. We asked him whether he meant /qurħa maʕidija/. But the patient insisted that there was a difference between those two terms. He explained that the former referred to a *stomach ulcer* while the latter was a *colon ulcer*. Another female patient who was a nurse of school medicine said that she suffered from /idtira:ba:t fi: alhurmunat/,meaning, *a hormonal disturbances.*

We asked a resident doctor about how to say to a patient that he or she has a hormonal disturbance using AA. He replied that all what is physiological, hormonal, biological cannot be explained to patients through AA. So, they did not tell them anything.

3.6.1.2.2. The patient's health literacy level

The second question of this section asked informants to assess their level of health knowledge. Results reflect the large existing deficiency in health literacy

amongst patients whatever their educational level was. Of course, this deficiency creates a large gap between physicians and patients.

Table 3.8.Patients' self assessment of heal literacy

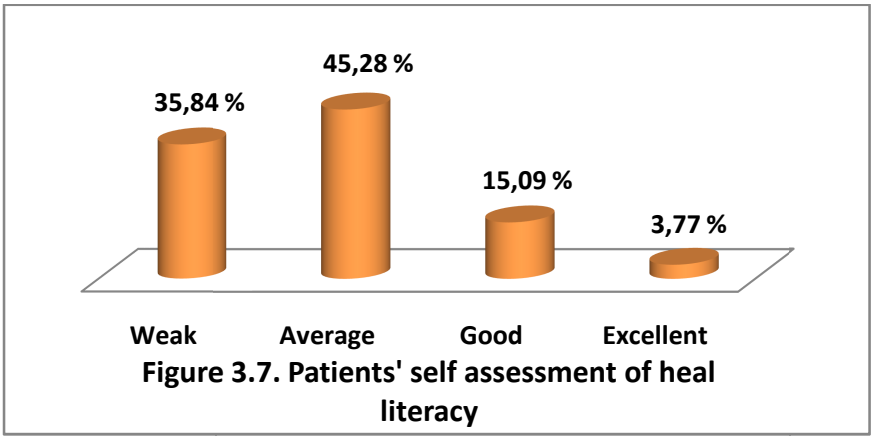

Figure 3.7. Patients' self assessment of heal literacy

As shown in figure 3.7, the highest rates were recorded in the categories 'Average' and 'Weak'in which 45, 28% and 35, 84% were recorded respectively. 10 informants (41% out of the 'Average' category's percentage) with a university level of education claimed that they had an average level. On the other hand, 3 university graduate informants said that they possessed a weak level of health knowledge. Only 2 informants (3, 77% of the whole sample population.) claimed they possessed good health knowledge. They were a nurse and a computing engineer. We recorded a percentage of 15, 09% of 8 informants as for the good level. Two of them were biologists. One was a former pharmacy assistant. Another patient in the 40s with a good level of French competence said that two of her brothers were doctors and they were used to discussing medical issues together. The remaining informants of this category told us that they learnt many things through their long experience with diseases both as patients and care givers to children and parents.

The overall low level of health literacy is partly due to the absence of sensitisation programs and mobilisation activities that can help fill this gap between doctors and patients, at schools and universities, TV and radio. On another part, it is because of the poor communication that occurs between a health provider and health receiver. The use of a non-scientific and sometimes meaningless language prevents accurate information transfer. As a consequence, it does not help patients improve their medical knowledge or learn about their diseases. Furthermore, doctors are not always available and willing to give patients sufficient information and clarification due to lack of time. We observed that doctors are not used to be asked by patients, they have prior conceptions that patients will not understand if they explain medical things so they prefer not to confuse them. They also tend to exclude those who use medical language, for instance, after a consultation, the researcher asked the doctor about the previous patient's illness and whether he had a *Raynaud symptom*. But the doctor was frustrated and replied rudely that it was not the researcher's business without giving an answer. Similarly, a friend told us that once she tried to discuss with a doctor the difference between 'entorse' and 'déchirure' but the doctor asked her back whether she was a medicine student. When she knew that she was not a medicine student the doctor laughed at her saying /raki tetmaʕlmi/ which is a disapproving way to say that a person is trying to get some knowledge. There were also doctors who did not deny this. In a comment, one doctor wrote: *sometimes we feel that patients want to be doctors, we hope that patients stay patients.* Others said that they had difficulties with people who asked a lot of questions and intellectuals /jqarqFu/ i.e., they are annoying.

3.6.1.2.3. Language of health knowledge

In fact there is a correlation between this question and the previous one. In what follows we present the obtained results.

Table 3.9. Patients' language of health knowledge

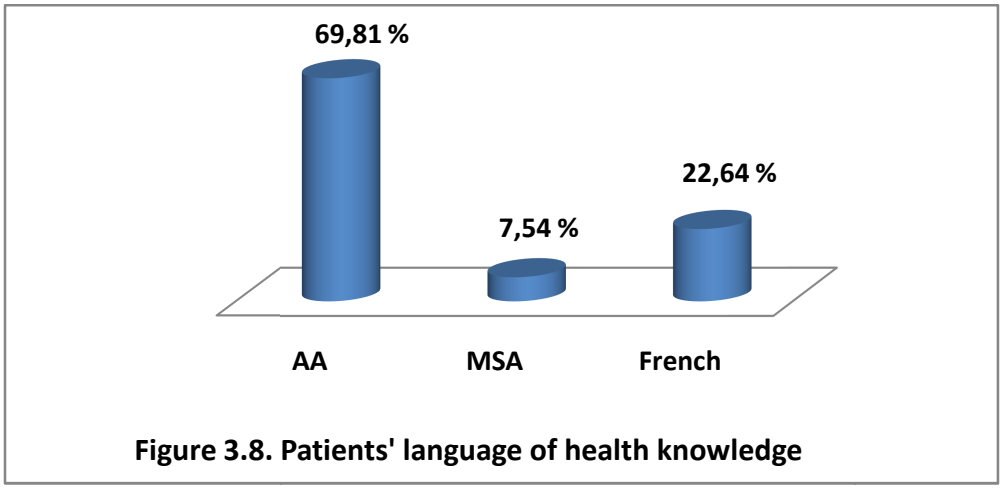

Figure 3.8. Patients' language of health knowledge

The majority of informants 69,81% stated that what they have as health knowledge is available to them in AA. However, this variety is not a standard one and cannot serve to acquire accurate scientific information. Accordingly, this explains why the rate of informants who claimed not to possess a high level of health knowledge was very high (See figure 3.7), 35,84% and 45,28 % for weak and average levels, respectively.

On the other hand, only 22,64 % of the informants said that they had health knowledge in French. This also reflects the little percentage of informants claiming having good to excellent health knowledge since French is the vehicle of scientific and medical knowledge in Algeria. While MSA, the Arabic standard variety, could not record more than 7, 54%. Although we noted that informants who used MSA to answer the first question showed a better understanding of their illnesses than those using AA. Unfortunately, in the Arab world, especially in the Maghreb, Arabic is regarded as a language that can only serve in literary domains, whereas, many scholars and famous personalities (e.g. Napoleon Bonaparte (1914), Sir George Bernard Shaw (1936) Carra de Vaux (1921), etc.) recognise that

> Arabic was the language of learning, culture, and intellectual progress for the whole of the civilized world […]. From the IXth to the XIIth century there were more philosophical, medical, historical, religious, astronomical, and geographical works

written in Arabic than in any other human tongue. (Phillip Hitti)[34]

3.6.1.2.4. The ability to understand and speak easily with doctors

Table 3.10. Patients' ability to understand and speak easily with doctors

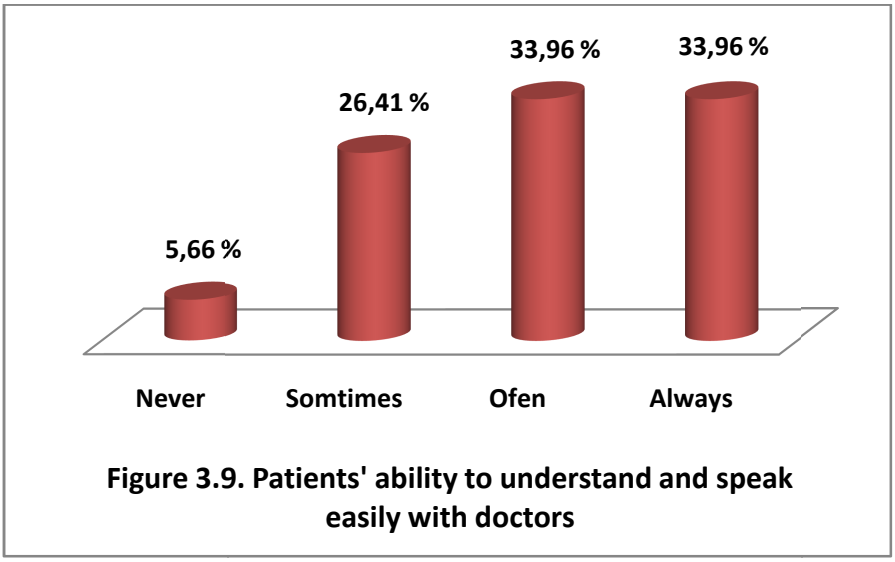

Figure 3.9. Patients' ability to understand and speak easily with doctors

All the informants who said that they did not understand doctors had a weak level of comprehension in French and in health literacy. One of them was a female in the 40s with a primary level of education. The other two informants had a secondary level of education, in the 20s.They came from the East of Algeria. They told the researcher that they did not understand the dialect used in SBA because they came recently, especially one of them who was Berber. In the next category 'Sometimes', 4 informants (i.e., 28, 57% out of the 14 informants) had a weak level of French and a weak level in health literacy. They had primary educational level except for one who had a middle school level. In the same category, half of the informants had a weak level of understanding French, of health literacy, and one of them had a university

[34] Source : cited in Short History of Arabs. www.cyberistan.org/islamic/quote2.html (Accessed on 07/04/2012)

level. The rest of this category's informants were university graduated but they said that they could not understand all the doctor's statements because their language is loaded with French and technical terminology, and they did not take time to explain and simplify things. The last two categories included mainly patients with high level of education, of French, of health literacy, a good income, and the majority was coming from urban cities. Those with the opposite backgrounds either were subjective in their answers or were not aware about the problems of poor communication and linguistic barriers.

3.6.1.2.5. Access to sufficient information

There was a considerable equal division in response regarding whether physicians provided sufficient information to their patients. The figure below exposes the results.

Table 3.11. Access to sufficient information

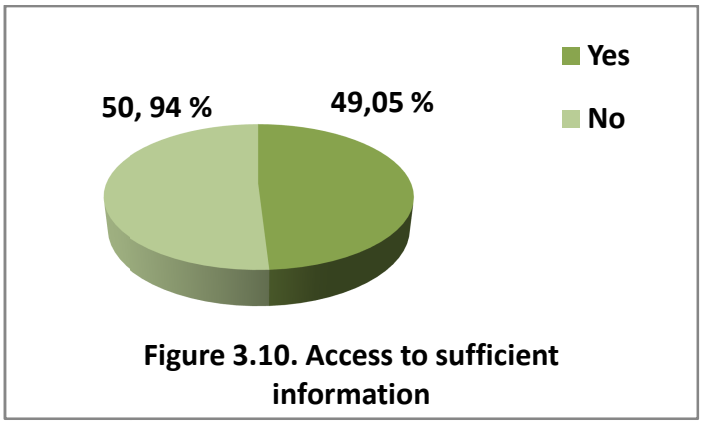

Figure 3.10. Access to sufficient information

When commenting on this question, informants said that it differed from one doctor to another, from the public to the private sector. Some patients said that doctors in the private sector gave more time and information to patients than doctors in the public sector. The others said the opposite claiming that doctors in the private sector wanted to receive as many patients as possible to gather as much money as possible;

therefore, they spent less time and gave little information to patients. However, when we compared responses of patients in the private sector with those of patients in the SCU, we found an equal division of responses in both sectors.

Table 3.12. Access to sufficient information: private sector vs public sector

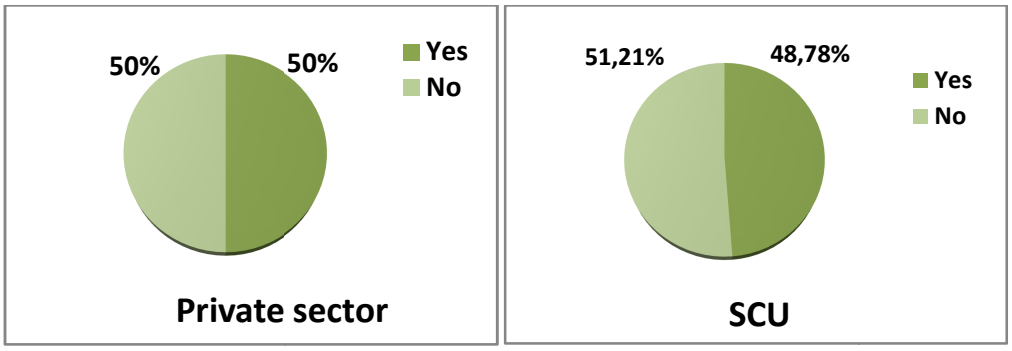

Figure 3.11. Access to sufficient information: private sector vs public sector

Here are some examples of patients' comments on this question:

Example 1: *Information is limited to the days of appointment.*

Example 2: The d*octor prescribes the drugs without explanations*

Example 3: *Doctors use French but they don't explain to us, and few of them are patient with us.*

Example 4: *Sometimes they rush without any explanation. They read the medical reports that is all. They speak in French.*

Example 5*: They don't explain us the medical test reports. They say they are good, that is all.*

3.6.1.2.6. Language used by doctors

The majority of informants (86,79%) said that doctors mixed Arabic and French when they talked to them as displayed in figure 3.11.

Table 3.13. Language used by doctors

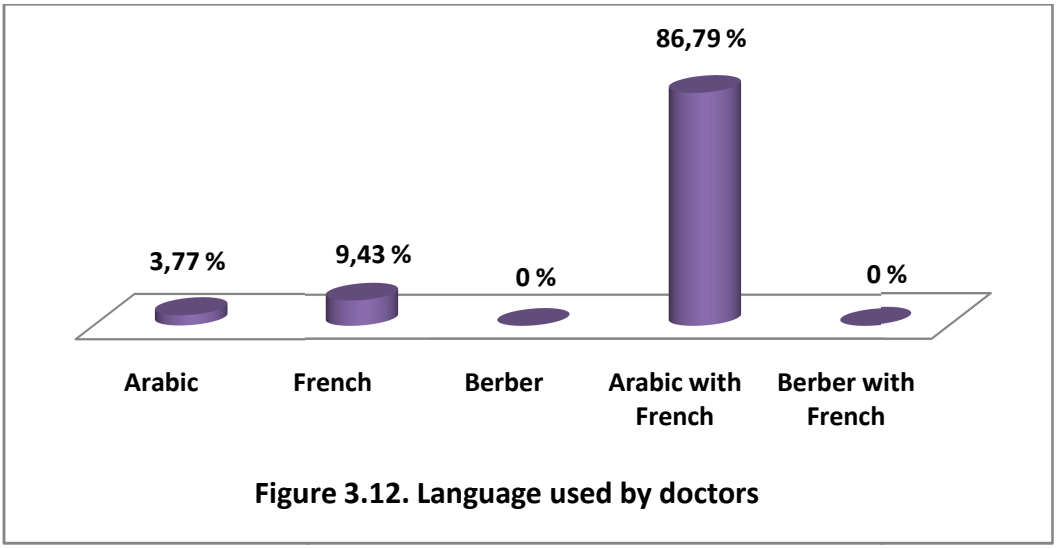

Figure 3.12. Language used by doctors

So we asked them what language doctors used more to see whether switches to French were limited to some few words or long stretches of sentences were used. 35 informants (76,08 %) said that they used more French than Arabic. However, barely 3,77 % of the entire sample population said that doctors used only Arabic. Undoubtedly, this was a very low rate which was even exceeded by the percentage of informants who argued that doctors talked to them only in French. No informant said that doctors used or mixed Berber with other varieties.

3.6.1.2.7. The use of medical jargon and ambiguous language

Through this question we wanted to see if doctors could avoid using the medical jargon and whether they used an intelligible language with patient. We summarise the obtained results as follows:

Table 3.14. The use of medical jargon

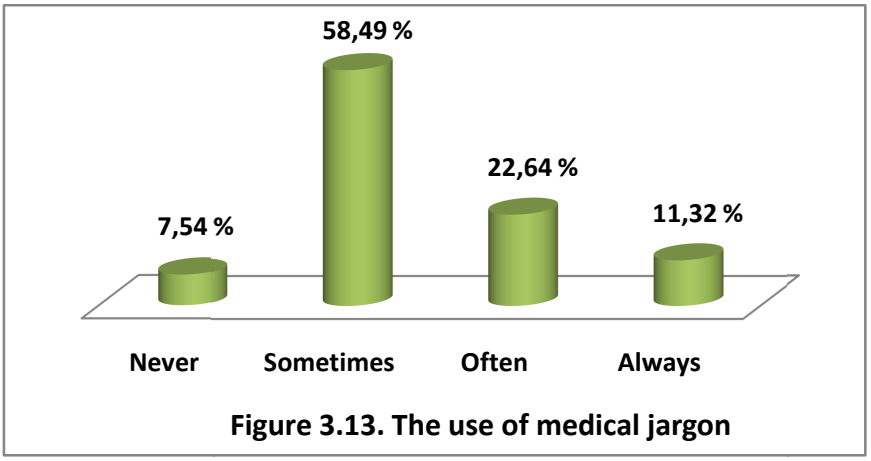

Figure 3.13. The use of medical jargon

From this table we can see that only 7,54 % of the entire sample population denied that doctors used medical jargon and ambiguous language during the medical encounters. The highest score was recorded within the second category 'Sometimes' with a percentage of 58,49 %. We noticed that this rate decreased as the degree of frequency of jargon use increased. 22,64 % of the informants said that doctors often use medical and ambiguous language, whereas 11,32 % said that they always did.

One might say that in spite of the efforts made by doctors to limit medical terminology, they fail to avoid it completely from their speech. Moreover, it happens that they give ambiguous explanations when they attempt to clarify medical things in a simple language. For instance, a year ago, the researcher heard a patient saying that she had Rhumatisme [ntaʕ BddBm] (Blood rheumatism) but she did not know what it was. However, in reality this disease does not exist. So, we made a research in internet. We found that there were many Algerian persons looking for its meaning, in some medical discussion forums, because they had been told they had that disease. The majority of doctors, in that forum, said that there was no such type of rheumatism. Only one doctor said that, in the Maghreb, there were some doctors who used this term for inflammatory rheumatism. Then, we could find that inflammatory rheumatism is highly linked with what is called *sedimentation rate* (SR),which is known in French as ' la vitesse de sedimentation (VS)'and refers to an hematology test of the rate at which red blood cells sediment in a period of 1hour. When sedimentation takes more than the necessary time, the patient is, possibly, said to have inflammatory rheumatism. This

can explain the use of the term blood rheumatism by some doctors. Another female patient with inflammatory rheumatism had been told this: /dBmmBk rah tqiːl/ and she believed that her blood became thick. However, the doctor meant a high SR because blood became thick when the patient suffers from *anemia* which was not her case. In this case we can say that a pragmatic failure has occurred. The patient interpreted the information given by the doctor according to her basic knowledge. The word /tqiːl/ is used in AA to refer to a liquid when it is thick. How would a patient with low health literacy think of the process of blood sedimentation, especially if the doctor did not take time to explain such things even to educated persons neither in French nor in Arabic /surʕat Bttarasubʔddam/. When we attended with some doctors in the internal medicine room consultation we noticed that they used these terms /VS tajħa/ and / VS talʕa/ to refer to low and high SR, but they did not give additional information to the patients who seemed worried and not knowing what their exact problem was.

Another example is a female patient in the 20s with a licence degree who had a *fibroadenomas (breast fibroma)* told us that when she asked the doctor about the causes of this fibroma the doctor told her that it was due to her little weight. But in reality both slim and fat women may develop fibromas. In fact, it is caused by hormonal imbalance of the *estrogen* level which is responsible for its development. The doctor could at least use MSA since the patient had a high education level. The Arabic term /ixtilaːl fi tawaːzun hurmuːn ʔal-istruFiːn/ instead of confusing her. Because this might lead to dangerous results, especially if the patient adopted self-medication techniques in order to gain some weight.

3.6.1.2.8. Frequency of questioning doctors

Patients complained that doctors did not answer their questions or give them enough information. So the purpose of this question was to see if patients ever asked doctors for clarification in case of incomprehension.

Table 3.15.Questioning doctors

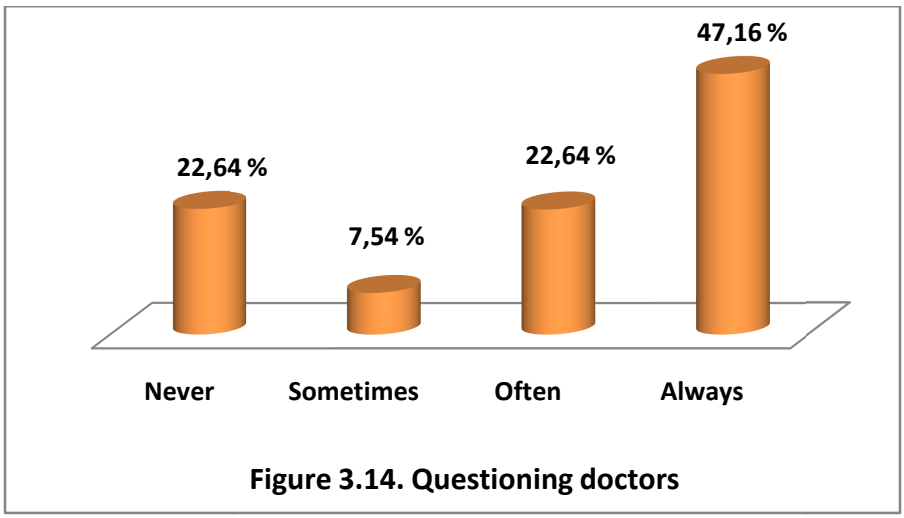

Figure 3.14. Questioning doctors

This figure shows that the majority of informants fell into the two last categories of 'Often' and 'Always' with 22,64 % and 47,16 %, respectively. Nevertheless, 22,64 % of the sample population stated that they did not ask for clarification either because they felt afraid and scared of doctors or because they felt timid and ashamed to reveal to doctors that they did not understand French or medical language, especially if they were university graduated. For example, a patient blaming himself said: *I can't ask doctors because I often feel ashamed to do it. I have a university degree, I think that If I don't understand it is my own fault*.

As far as the second category 'Sometimes' the informants said that it depended on who their doctor was. One patient said that '*there are doctors that one can ask them but there are other doctors that make patients afraid of talking to them'*.

In fact, many of those who said that they often or always asked for clarification did not. During our fieldwork, we happened to attend medical encounters with patients that we had already interviewed and we could notice that they did not ask questions at all neither for clarifications nor to seek other information, even if the doctor used a lot

of French and medical jargon. For instance, during a visit the doctor was addressing a female patient, in the 20s from Rass El-ma, a rural area, and with a primary educational level, mainly in French. Sometimes, the use of non-verbal language helped the patient understanding sentences like '/ les poignets et les epaules jdurru:k ?/' (Do you feel pain in your wrists and shoulders) showing the wrists and shoulders. But when the doctor said this '/Gu:fi/ quand on va faire le test on va être trés limité **** /kajBn/ des radios et des analyses qu'on ne peut pas faire euh euh /kifaG ngullBk/ pour explorer euh /baG nʔeksplori ʔBddor li rah fik ʕlabal/ le bébé' (Look, we will be very limited in the test that we will do**** There are some x-rays and biological test that we cannot do to euh euh how to tell you to explore euh to explore your disease because of the baby). The doctor switched between AA and French, hesitations prove that these switches were due to linguistic deficiency in AA to speak about medical matters. It was apparent that the patient did not understand all what the doctor said. However, she did not ask the doctor to translate to Arabic or to clarify. She kept staring, blankly, at her. We, also, noticed that when a colleague or a student of medicine was present the doctor discussed the patient's condition with them and instead of explaining things to the patient; they talked together, in French and used technical terminology. The patient, on the other hand looked and listened, carefully, to them without understanding anything and did not dare to question his or her doctor. Patients focused mainly on asking questions about their blood pressure and on how to take their medicines. This can be also explained by a fact that in our society doctors are much respected to the extent that patients thought that they would disturb or annoy them if they asked them question even if they pay for their services.

3.6.1.2.9. Frequency of replies to patients' questions

It has been written it the literature that doctors asked more questions than they answer (See section 1.8.2.) In fact, we have used a type audio recorder to confirm or disconfirm it, but we were unable to clearly listen to the recorded conversations due to the noisy nature of the SCU. Hence, to analyse this question we rely on patients' answers and our observation.

Table 3.16. Doctors' frequency of answering patients

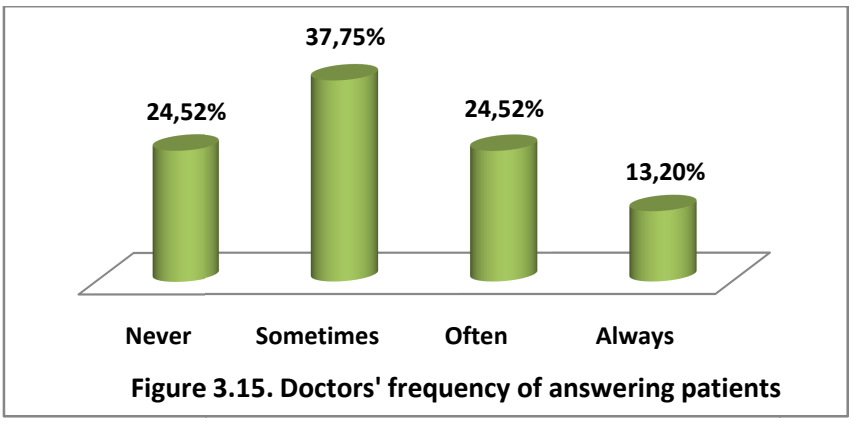

Figure 3.15. Doctors' frequency of answering patients

The figure displays the results of the informants' responses. A large number of informants (24,52% in the 'Never' category and 37,75 % in the 'Sometimes' category) complained that doctors never or rarely answered their questions. In addition, observation demonstrated that doctors asked a lot of close-ended questions that limited patients' answers and if a patient provided a long answer the doctor interrupted him or her.

3.6.1.2.10. The patients' need for French

The aim of this question was to check the importance of French to patients and whether they felt the necessity to speak it in order to discuss and get medical information.

Table 3.17. The need for French

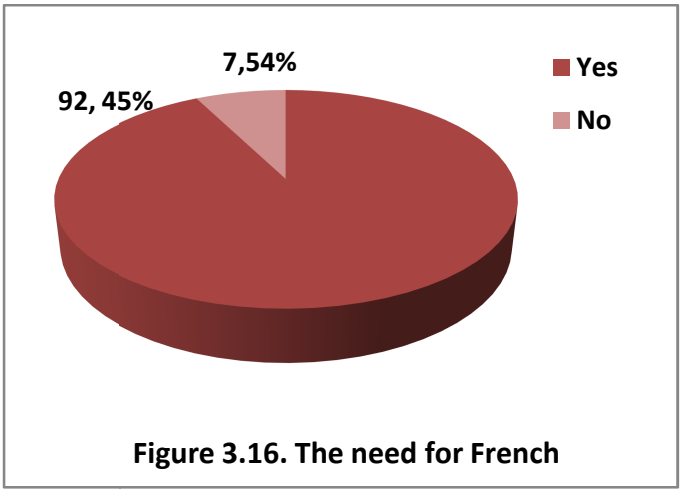

Figure 3.16. The need for French

The majority of patients (92,45 %) replied by 'yes'. This reflects the need of the largest majority of patients to learn French. They believed that a good mastery of French would help them understand better their illnesses, and to effectively communicate with doctors. To illustrate, here are some of the patients' comments on the importance of French in medical encounters.

Example 1: *I wish I can understand what doctors say about my disease to other doctors and residents.*

Example 2*: There are many doctors who use much French, female doctors in particular.*

Example 3: *I need French because doctors explain things in French and I don't understand it.*

Example 4: *I need French to understand better my thyroid problem*

Those who gave a negative answer had already a good level of French and used it to speak with doctors. They thought that doctors can easily simplify things to patients through AA.

3.6.1.2.11. The most important barriers to healthcare communication

In addition to linguistic barriers there are other barriers that hamper communication between doctors and patients such as economic, social, and gender differences. We have used a rank order scale question in which the informant had to order four barriers to D-P communication from the most to the least important barrier affecting communication. A ranking order scale approach is very useful in social

studies, because it provides data were a comparative decision and not just an opinion about a single item is represented. To analyse the results of this question we have simply reversed the number order and the rank order became the score i.e., the most important barrier was given 4 points, then the next most important barrier was given 3 points, and so on. Then, we have added up the points of each item and we could get its score.

Table 3.18. The most important barrier to healthcare communication

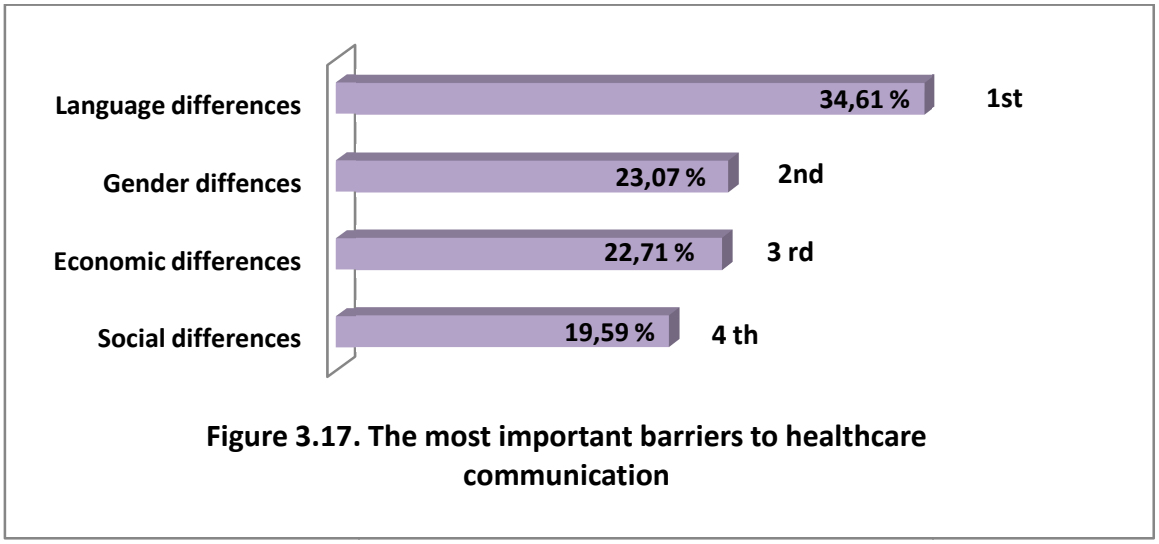

Figure 3.17. The most important barriers to healthcare communication

The figure above represents the obtained results. First, there were no big differences in results between economic, social and gender differences. But the highest score was achieved by the item 'linguistic differences', with 189 points. Linguistic barriers were regarded by most of the informants as the major barrier to effective D-P communication. Then, came 'gender differences', with 126 points, followed by 'economic differences', with 124 points. Gender and economic differences are also important barriers to D-P communication. Many female patients said that it was difficult for them to talk to male gynecologists. On the other hand, if the economic status of a patient was very low, it might hamper communication. We have seen this, during a visit in which there was a patient with a gastric problem. The ultrasound scan of his abdomen showed that he had more than two liters of fluid in the abdomen which seemed strange to the doctor. But, when she examined him, she doubted on the

reliability of the ultrasound scan results. So, she asked the patient to repeat the tests to confirm the presence of all this quantity of liquid, in his abdomen before making any decision about the treatment. However, the patient who could not afford repeating the tests due to his low income (he was an agricultural labourer) did all his best to convince the doctor that he really felt the presence of a lot of that fluid in his abdomen and that this latter is more swollen than usual. This created a mutual incomprehension between the doctor, who was thinking about the importance of repeating the tests, and the patient, who was only thinking about the high cost of those medical tests.

Finally, differences in social status include differences in educational level, occupation, place of residence, age, etc., These are an important factors that are likely to impact D-P communication. Nevertheless, it appeared that people were not aware of their importance. The social differences got the lowest score with only 107 points.

3.6.1.2.12.Patients' satisfaction with the P-D communication

The following figure shows that the highest rate 47,16 % of patients claimed that they are occasionally satisfied with D-P communication. The results of this question in particular will be analysed in a next section (**3.6.3.)** statistically in relation with patients level of understanding French.

Table 3.19. Patients' satisfaction with the language used by doctors

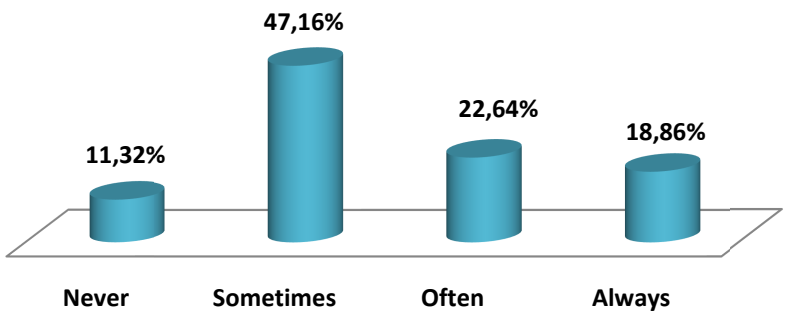

Figure 3.18. Patients' satisfaction with the language used by doctors

3.6.2. Results and analysis of the doctors' questionnaire

3.6.2.1. Section A (The social and linguistic background information)

3.6.2.1.1. Age

The following table presents a comparative distribution of the sample population on four major age groups, in public and private sector.

Table 3.20. Doctors age groups in public and private sectors

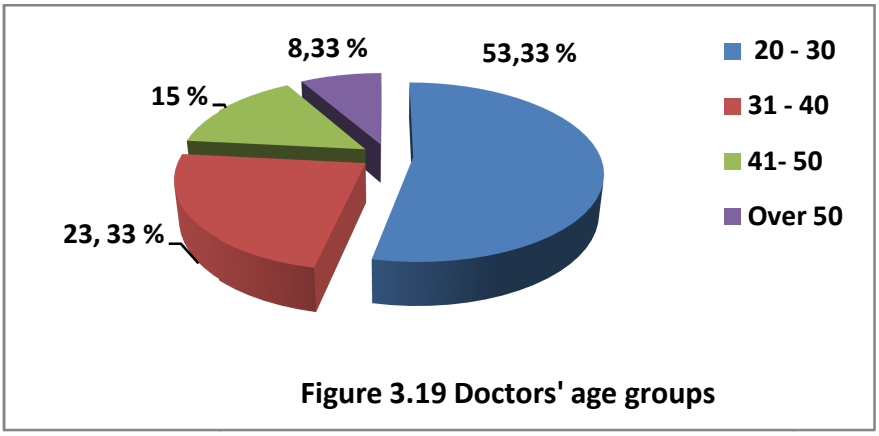

Figure 3.19 Doctors' age groups

More than half of the sample population (53, 33%) was in the 20 to 30 years old age group. The reason behind this was that resident doctors represented the major workforce of doctors in the CHU of SBA, i.e., they outnumbered junior and senior doctors. Besides they were more helpful and accepted to respond our questionnaire. As a whole, doctors at the hospital were young; they might not yet be able to work for their own, in contrast to doctors in the private sector who were older. The table shows that the 5 doctors above 50 years old had their own medical offices.

3.6.2.1.2. Gender

Twenty five (41,66%) out of 60 respondents were female doctors and 35 (58,33%) were male doctors. In fact, 4 male doctors helped us to distribute the questionnaires; they gave them mostly to their male colleagues, accordingly, their number exceeded that of female doctors.

3.6.2.1.3. Frequency of use of languages

Being the mother tongue of the majority of Algerians, AA is logically acceptable to be 'Always' used by most of our respondents with a percentage of 85%, then it was followed by French at a rate of 63,33%, in the same category. In the next category, 33, 33% of them said that they often use French which is also a high rate of use. This means that a large number of doctors use French as their default mode of conversation because they are deeply influenced in their linguistic behavior. On the other hand, although both French and MSA are H varieties to be used in formal settings, in Algeria, MSA is not given as much importance as French by doctors. 44,33% of the sample population said that they 'Sometimes' used MSA and 20% of them said that never used it.

Table 3.21. Language use frequency

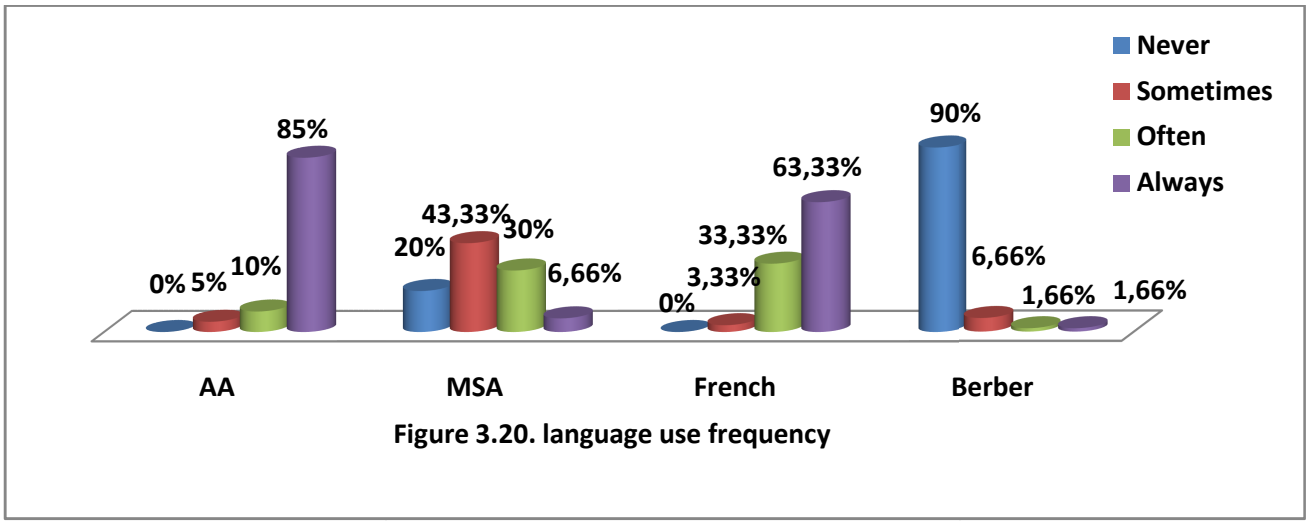

Figure 3.20. language use frequency

From these results, we could deduce that at least 6 respondents had Berber as their mother tongue. The question about the mother tongue was dropped for reasons

that were already mentioned in the previous section of this chapter, as with the patients' sample population. Berber's frequency use was very small. One doctor who was from Kabylia (Tizi Ouzou) said, that he always used Berber, he certainly meant with berberophones. Another Berber doctor from Algiers said that she often used it. Obviously, Berber is much used there. The four other Berber doctors, who said they 'Sometimes' used it, were born and grown up, in SBA, they used it occasionally.

If we compare the results of this question with those in which patients had to mention their frequency of use of each language (See figure.3.21), we find that there is some considerable similarity in the results as far as the percentages of use of the mother tongues AA and Berber between patients and doctors. The most remarkable divergences lie in the contrasting rates as regards the frequency of use of French between doctors and patients. 63, 33% of the doctors said that they always used French, while only 7, 54% of patients said they always used it. In the 'Often' category doctors recorded a rate of 33, 33% whereas patients' score was 13, 20%. Nearly, half the patients' population stated that they sometimes used French, while not more than 2 doctors (3, 33%) used French occasionally. When we consider the rate records of MSA, we find that doctors exceeded patients in terms of its frequency of use. This can be explained by the fact that all doctors had a high educational level in contrast to patients whose educational level varied from one patient to another, in addition to the relative importance of other socio-economic factors such as age, social class, place of residence and income, in shaping the individuals' linguistic repertoire. These results reflect the existing linguistic gap between patients and doctor especially as far as French which is very important to discuss medical topics in Algeria.

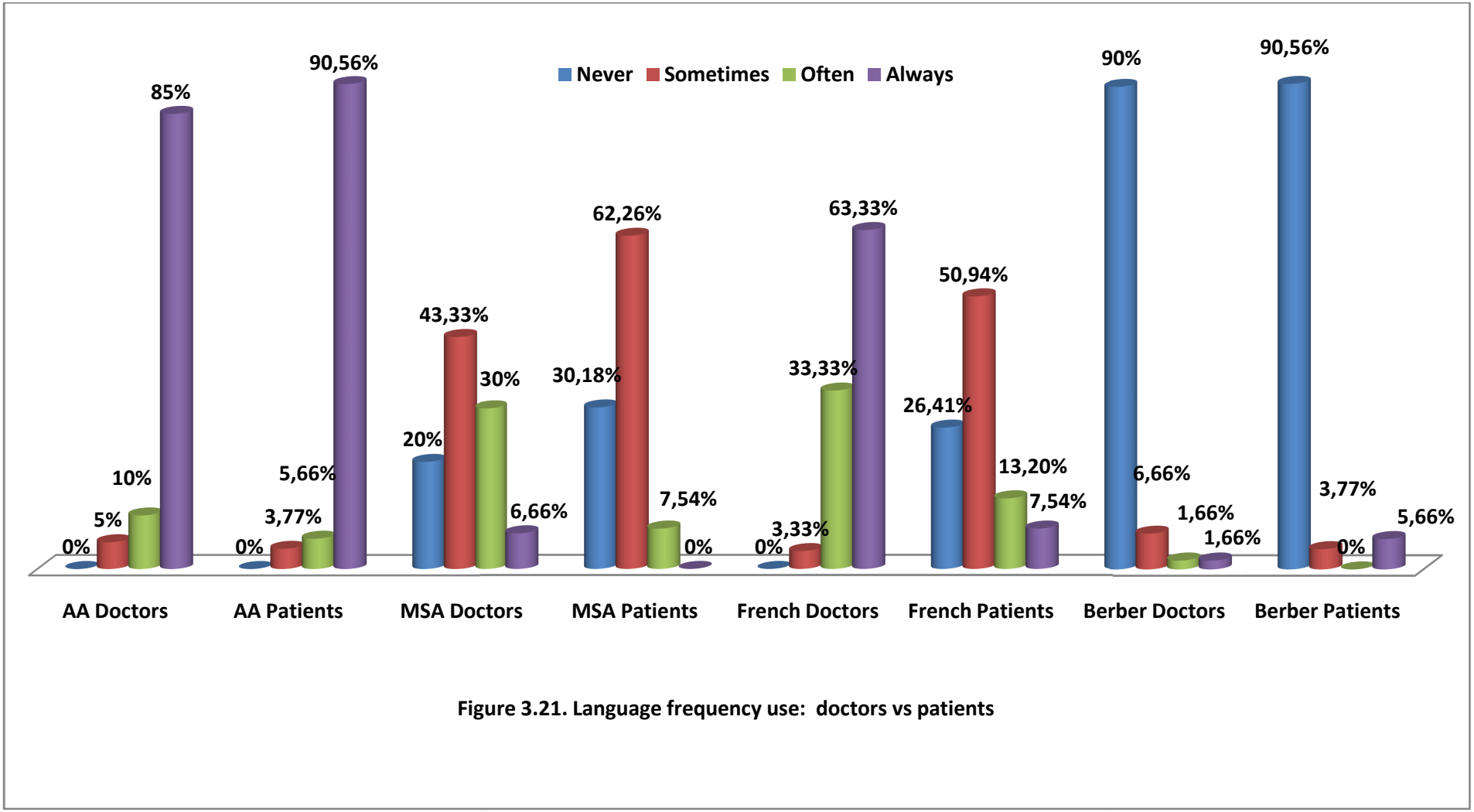

Figure 3.21. Language frequency use: doctors vs patients

In our observational study, during medical encounters, we noticed that at the beginning doctors used some MSA words to explain things to patients but as time passed and doctors got familiar with our presence in the consultation room, the use of MSA decreased gradually until it was not used at all. For example, the endocrinologist used these words with the first two patients

/muḍa:ʕafa:t/ (complications),

/maraḍ muzmin/ (a chronic disease),

/mudda muʕajjana/ (precise period of time).

/ʔalɣudda li tufriz alhurmu:na:t maʕandekG/(you don't have the gland that produces hormones)

Later on, with another patient she said: /Blʕubraṛa ntaʕek matsarbiG mliħ/ (your thyroid gland does not secrete adequately).

At first, the doctor used the term /tufriz / which is used in MSA, meaning *produce* or *secrete*, in English, with the first patient, then she used its AA equivalent /tsarbi/ with the second patient, though the first patient was older (75 years old) and from a rural area 'Tighalimet', and supposedly cannot understand it and the other one was in the 50s from SBA. One may think that the use of MSA, during the first consultations, was a result of what Labov (1972) called 'the observer's paradox' which makes speakers behave less naturally when they feel that they are systematically observed.

3.6.2.1.4. Doctors' self-assessment of proficiency in French

The purpose of this question is to determine the doctors' level of French language proficiency and then compare it with the patients' level of understanding French so as we can determine that French presents a linguistic gap between doctors and patients. The results show that the majority of doctors ranked themselves in the 'Excellent'[35] and the 'Good' categories with 31, 36% and 61, 66%, respectively,

[35] Especially at the private sector where we noticed that 10 out of the 11 respondents assumed themselves to possess an excellent level of proficiency in French.

while, few patients ranked themselves in these two categories and the lowest levels in understanding French by patient obtained the highest percentages.(Compare figure 3.22 with figure 3.6.)

Table 3.22. Doctors' self-assessment of proficiency in French

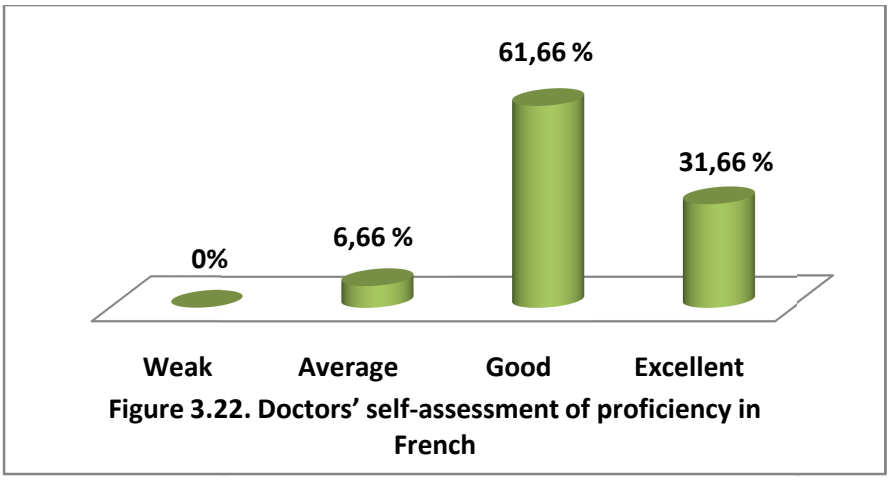

Figure 3.22. Doctors' self-assessment of proficiency in French

3.6.2.2. Section B (General information on language use in medical setting)

3.6.2.2.1. The doctors' most used language at work

It is worth mentioning that upon arriving at the hospital, we may see that the signposts and notices of the CHU of SBA were written in both French and Arabic but there were also some signposts that were written only in French. Besides, all the administrative work was done in French. We did not see any form or paper written in Arabic. When we asked some administrative assistants about what language they use most for internal and external correspondences, they confirmed that it was only in French. Even when they received mails, from the ministry, written in Arabic they replied in French.

Table 3.23. The doctors' most used language at work

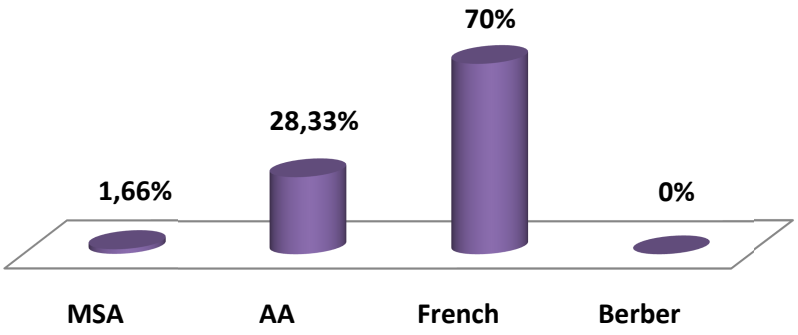

Figure 3.23. The doctors' most used language at work

In this question, doctors were asked to indicate the language they mostly used at work. The majority of respondents (70%) referred to French. This result is supported by the researcher's own observation during data collection. We noticed that French is widely used, especially, by doctors around the different departments of the CHU of SBA. For instance, when we went the first time there to ask for a permission to carry out our investigation, we asked a female doctor, that we met, about where we could find the office of the HPA we used Arabic in purpose to address her but we were surprised to be answered in French: 'justement on le cherche aussi, patientez là-bas à son bureau c'est le premier à droite'[36]. Also, at the radiology department we observed two male doctors who used AA for greeting when they met and for discussing their personal affairs. But, they switched to French and technical jargon once they started talking about a patient's x-ray image. Further, while we were waiting for the head of the internal medicine department, we could hold an observation of a female doctor using some French to a patient's care-giver when she was giving him some instructions at the corridor.

We also observed that female doctors talked to each other mainly in French, by contrast to male doctors who used mainly AA and switched to French only when they addressed the head of the department as she used only French to give orders and instructions to the doctors, nurses and medical secretaries. However, both male and

[36] English translation: "Well, we are looking for him, too. Wait over there in his office, it is the first one on the right."

female doctors used French to talk to each other in the consultation rooms in front of the patients, maybe to exclude them from their conversation, and when they received telephone calls (a marked code choice).

3.6.2.2.2. The language used with patients

Questions about language preferences can reflect doctors' attitudes vis-à-vis one variety or another and all the same they can indicate through which variety it is easier for them to express themselves and discuss medical things when they communicated with their patients. This way, we could guess which language varieties they actually used during medical interviews. We also took into account the results obtained in the question in which patients had to mention which language doctors used with them, in order to confirm or to disconfirm doctors' answers.

Table 3.24. The language used with patients

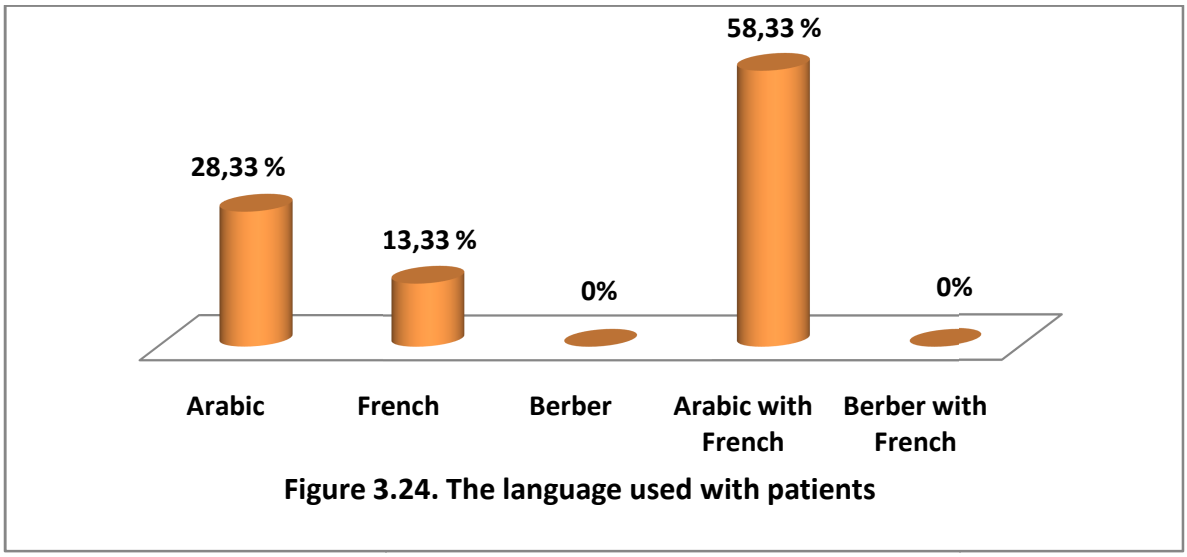

Figure 3.24. The language used with patients

When we compared these results, we found that there was a close correspondence between their responses. While more than half (58,33 %) of the respondent doctors said that they preferred mixing Arabic with French, the majority (86,79 %) of informant patients said that doctors mixed the two languages Arabic and French (See figure 3.12). This means that doctors found difficulty to avoid using French with patients. During consultation we noted that doctors used much French when addressing patients especially young ones. Old patients were usually

accompanied by someone. When this person was young, doctors talked mainly to him or her and switched often to French, without wondering whether they understood or not. Here is an example of a conversation between a female doctor, a diabetic female patient and her son.

Doctor: /tmBGGi tmBGGi xurFi hakka ddurbi dawra/. (Go out for a walk.)

Patient: /bBşşaħ maneFFBmG jzajjar ʕlija şadri/. (But I can't my heart tightens.)

Doctor: /tmBGGi ki jzajjar ʕlik jFibuk lina lBl cardio ndirulBk l'ECG madabina/. (Go for a walk and when it tightens they bring you to the cardio to make you an effort ECG, it suits us.)

The doctor to the son: /Fibhalna on lui fera un ECG, une épreuve d'effort.. / (Bring her we will do her an ECG, it's a stress test.

The son interrupted the doctor: /wdik BlħaFa Blkaħla fi kraʕha/? (What about the black thing in her foot?)

Doctor: Ah, il faut le laisser tranquille, c'est un hématome. (You should just leave it, it's a hematoma.).

In this case the switch to French might be triggered by the use of some jargon words (See section 1.5.2.2. Clyne's (1991, 2003) trigger words theory). The doctor did not use only French but also some jargon without providing explanation, although the patient's son was worried and asked the doctor about the black thing appearing on his mother's foot. Doctors sometimes failed in their code choice which is very important to reassure patients.

Another old patient told this same doctor that she saw another doctor and she replied in French

Patient: /rani nemGi tani ʕand .. (She gave the name of the doctor)/. (I also go to doctor…)

Doctor: /L'essentiel tkuni suivie/. (What is important is to be followed up.)

We also noticed that if patients asked a lot of questions doctors started using much French as though they wanted to stop their questions.

3.6.2.2.3. Communication problems with patients

At first when we introduced our research topic so that the doctors accept to respond to our questionnaire, many of them denied the presence of any problem of communication with patients. These doctors often associated ineffective communication with being a bad physician and lacking communicative competence. Hence, they feared being viewed as such, or, possibly, they were not aware of the existence of these problems. Yet, when a problem of communication arises, it is not necessarily the doctor's mistake. Many psychological, social, economic, and other factors factors may affect communication in whatever context.

Total 3.25. Communication problems with patients

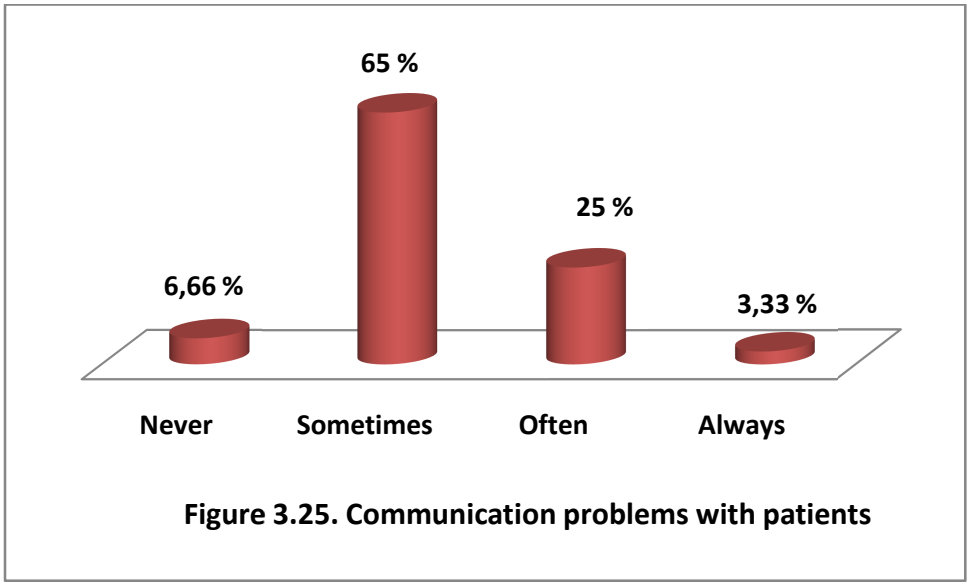

Figure 3.25. Communication problems with patients

Contrary to what those doctors stated, the results of our questionnaire demonstrate that 65% of the respondents 'Sometimes' faced communication problems,

25% 'Often' and 3,33% 'Always' did. These results eliminate the possibility of a complete absence of communication problems during medical interviews.

As a whole, doctors complained about the very low intellectual level of patients, the absence of medical culture and the persistence of non scientific beliefs, rituals and practices in the Algerian society. There were some doctors who qualified the D-P communication as 'mediocre'. Others said that the problem was that very little or no communication occurred at all. This was incidentally discovered during some medical consultations in which doctors relied mostly on what technological development offered to medicine. They, simply, read the test reports, used the ultrasound tools to examine patients and prescribed them the treatment without saying a word.

3.6.2.2.4. Linguistic barriers to D-P communication

The basic purpose of this study is to examine whether the coexistence of more than one language, and linguistic variation cause communication problems in healthcare settings in Algeria. Evidence showed that the majority of respondents (75%) provided positive answers affirming the existence of linguistic barriers as hurdles against effective communication in their job.

Table 3.26. Linguistic barriers

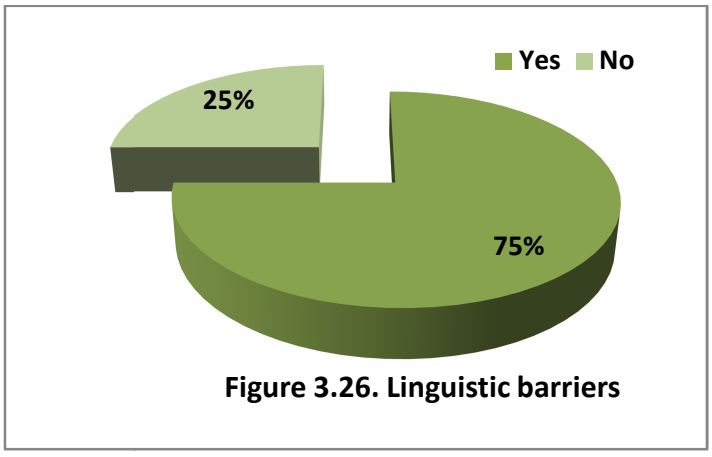

Figure 3.26. Linguistic barriers

In one of the emails that we have received a doctor stated[37]:

In Algeria, we suffer from a serious linguistic problem, we cannot manage to make a correct sentence to communicate with patients.

For instance, during history taking of a consultation, a doctor asked her patient whether she had undergone any surgery operation before. The patient used the word /ʔBzzajda/ to mean that she had had a cesarean section. But the doctor understood the word /ʔBzzajda/ differently, she asked the patient whether it was an *appendix*[38] (the vermiform appendix) surgery. Without understanding the meaning of the word *appendix*, the patient replied 'yes'. Fortunately, the patient was accompanied by her sister who helped clarifying things; otherwise the doctor would have been misled and could have ignored some important information.

Other questions were asked to identify the most pressing linguistic barriers that both doctors and patients faced in medical interviews.

3.6.2.2.5. French as a language barrier

Studying and practicing medicine in a language that is neither the country's official language nor any Algerian's mother tongue, and which is witnessing a sharp decline in terms of mastery and fluency at different levels of the society, maybe one of the possible linguistic barriers that affect the flow of D-P communication.

Table 3.27. French as a language barrier

[37] Ici en Algérie, on souffre d'un problème linguistique grave, on n'arrive même pas à faire une phrase correcte avec la quelle on peut communiquer avec les patients.

[38] in MSA it is called /ʔazzaːʔida ʔaddu:dija / or simply /ʔzzaːʔida/. This word had became very frequent in AA instead of the other term /mBsrana/.

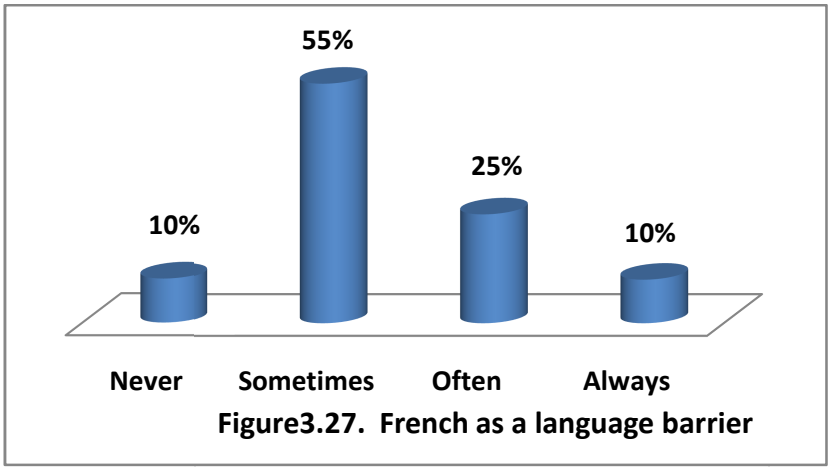

Figure3.27. French as a language barrier

Ninety percent of the sample population admitted that French created a language barrier to patients and doctors. However, their answers ranged in terms of frequency. These results are very acceptable because French is not always used since all doctors can use AA. The problem is that French cannot be completely avoided. Let us consider a comment given by a doctor on this question that we posted on a medical page on facebook:

Yes, French poses a problem, most of the patients do not understand it, the doctors do not know how to explain in Arabic without recourse to French i.e., to make a scientific translation of what they have diagnosed[39].

Within this same discussion another doctor said that: *French is the unavoidable cause, as is English in Saudi Arabia.*

Many doctors left comments in which they stressed that it was difficult for them to speak about symptoms, diagnosis, treatment, dosage etc., in the local language.

3.6.2.2.6. Jargon as a language barrier

Our research does not fall in a conversational analysis approach to examine the extent to which doctors used or could avoid the medical jargon with patients. Therefore we asked them whether it was possible to translate the medical terminology in the local variety AA. The following figure shows the obtained results.

[39] Oui, le français pose un problème, la plus part des malade ne le comprennent pas, les médecins ne savent pas s'expliquer en arabe sans avoir recours au français c'est à dire faire une traduction scientifique de ce qu'ils ont diagnostiqué.

Table 3.28. Jargon as a language barrier

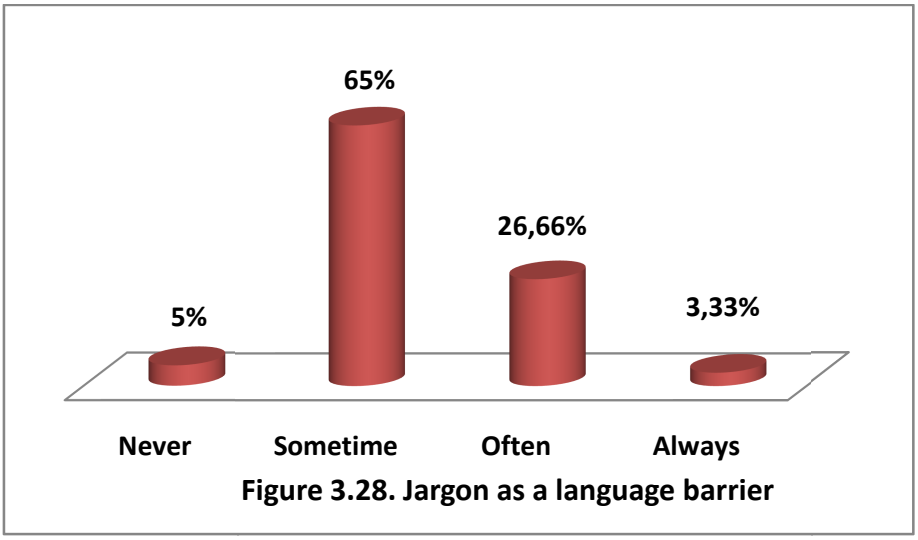

Figure 3.28. Jargon as a language barrier

We assumed that if we asked them whether it was possible to avoid using it or whether they used it or not, during medical encounters, they would provide us with a set of subjective answers. So, to verify this, we relied on observation during consultation and the data provided by patients on the question in which patients had clearly stated, to varying degrees, that doctors used medical terms and ambiguous language (See figure 3.13). Nonetheless, jargon is not always problematic. It comes when it helps enhancing communication and providing more information and explanations, especially in case of educated patients. It becomes problematic when it is used knowing that it can confuse the patient or if it does not help the patient understand his or her illness. In a monograph[40] based on a roundtable discussion, Laura Johnson Morasch (2004: 02) wrote that 'medical jargon can therefore be both a tool for effective and efficient communication, as well as a significant barrier to understanding. The sophistication of the audience determines whether jargon can hinder or help communication'.

[40]Source: Molina Healthcare California Academy of Family physicians (2004) http://www.familydocs.org/assets/Multicultural_Health/MedicalJargon.pdf (10/04/2012)

In the following examples the doctors' use of jargon was inappropriate because the patients were old and illiterate.

Example 1: /Le cholesterol kan talBʕ men les corticoides/ (Cholesterol level was high due to corticosteroids.)

Example 2 : /darulek les coups de stress/ ?

Example 3: /lqawlBk l'acide urique/? (Have they found uric acid?)

Example 4: /hada jGufah l'ORL/ (It's an ENT who should see it).

Using AA to translate or paraphrase the medical jargon into plain language is not always an easy task. We asked doctors to give some examples of terms that are difficult to translate to AA. We suggest some of them as follows:

Ascending cholangitis,	*Esophageal varices,*	*Pharyngitis,*
Astigmatism,	*Fibroma* **vs** *Cyst,*	*Pterygium* **vs** *Cataract,*
Brain abscess,	*Glaucoma* **vs** *Arterial pressure,*	*IRM,*
Cornea **vs** *Iris,*	*Lymphoma,*	*IDM,*
Corticosteroids,	*Oesophagitis,*	*TVP*

Further, what makes translating such words more problematic is that each doctor and each patient translates and interprets them according to his or her social background. For example there are people who refer to the *Tonsillitis* as /ħlaqBm / or /ħla7Bm /, others use the word /wBdni:n/ which can confuse doctors if they understand it as 'ears', We also noticed that at some points, doctors really wanted to explain things to patients but they were unable to express their thoughts. So, they began hesitating, then they either stopped speaking without finishing the sentence or they turned to another doctor or student, in case they were present, to release their thoughts by using jargon and French.

3.6.2.2.7. The use of unintelligible words and dialects by patients

It is not always the patient who does not understand the doctor. Doctors meet different people who speak differently because they come from different backgrounds.

We asked doctors whether the linguistic variation amongst the Algerian population impacted communication. As expected, 80% of them responded by 'Yes'. Some doctors said that they did not understand some words and expressions used by some rural individuals. One Berber resident doctor from Tizi Ouzou said that he found great difficulty in understanding the AA variety of western Algerians.

Table 3.29. The use of unintelligible words and dialects by patients

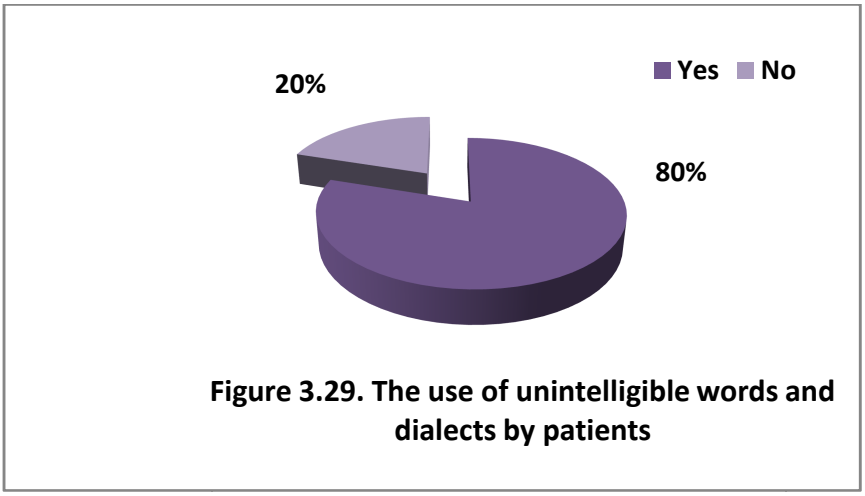

Figure 3.29. The use of unintelligible words and dialects by patients

Among the example that we could obtain we cite:

/xutt Bʂʂɣaːr/	/ɣuːɣa/ (goitre)
/zarwaṭṭ/ (miscarriage)	/ʕubra/ (goiter)
microbe /fBddam/ (a microbe in the blood)	/mad̲ʕuːfa/
/BFFaʕbuːṭ/	/jBrɣi/
/Blliːl/	/fih xuːh/
/Blkiːnja /	/Flala/ (Pterygium or Cataract)

We should note that, through time and experience doctors got familiar with these terms and they start using them. These terms stand as obstacles, mainly, to doctors at the beginning of their carrier.

3.6.2.2.8. The use of terms that distort the diagnosis

Asking doctors whether patients happened to use a language that might mislead the diagnosis was necessary, because the diagnosis of any pathology still relies heavily on a careful history taking. The following figure shows that the majority of respondents gave positive answers.

Table 3.30.The use of terms that distort the diagnosis

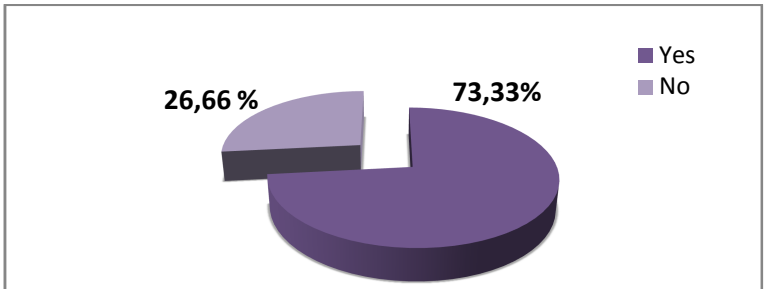

Figure 3.30.The use of terms that distort the diagnosis

The patient may tell the doctor that he or she has /wFaʕ fBʂʂdar/, the doctor understands that the patient has a *chest ache* while the patient meant a *breast ache* or a *heart ache*.

/galbi jBtlaʕ/ (my heart rises) or /galbi jBtzzajjar/ (my heat tightens) to mean *to feel nauseous* while the doctor may think of a *heart pain* and vice versa. Females do not differentiate between /ʔBlħBmma/ and /ʔBʂʂahda/ (*fever* and hot *flashes*). Besides, in an interview, a doctor spoke about the absence of some notions such as *infection*, *inflammation*, *virus*, *microbe*, etc., which are all translated by one term by patients /ʔBlbard/ (cold). This very often confuses physicians.

However, it is worthy to note that it is not only the use of some words and expressions from the local varieties that can confuse physicians. Doctors complained about patients who used French or pretended they had linguistic competence in French and misled them by their inappropriate use of this language and medical jargon. Doctor stated that patients did not distinguish between:

‘céphalée’ and ‘vertige’ (*cephalagia* and *vertigo*).

‘asthénie’ and ‘surmenage’ (*asthenia* or *weakness* and *overstrain*).

‘glaucome’ and ‘tension artérielle’ (g*laucoma* and *arterial pressure).*

‘dyspnée’and ‘fatigue’ (*dyspnea* or *shortness of breath* and *tiredness*).

Patients often used the word ‘migraine’ while they presented simple headaches or tension headaches.

Doctors added that many patients found difficulty in expressing their feelings and pain. When doctors asked them questions they answer by ‘yes’ without understanding exactly what the doctor meant. Sometimes they exaggerated or lied to them, especially, when it came to embarrassing questions about things that were viewed as sins or forbidden by our Islamic culture and social rules, such as drinking alcohol, smoking for women, and other practices.

The following figure presents the results of the doctors’ answers as far as the taboo impact on communication.

Table 3. 31. Taboo as a barrier to communication

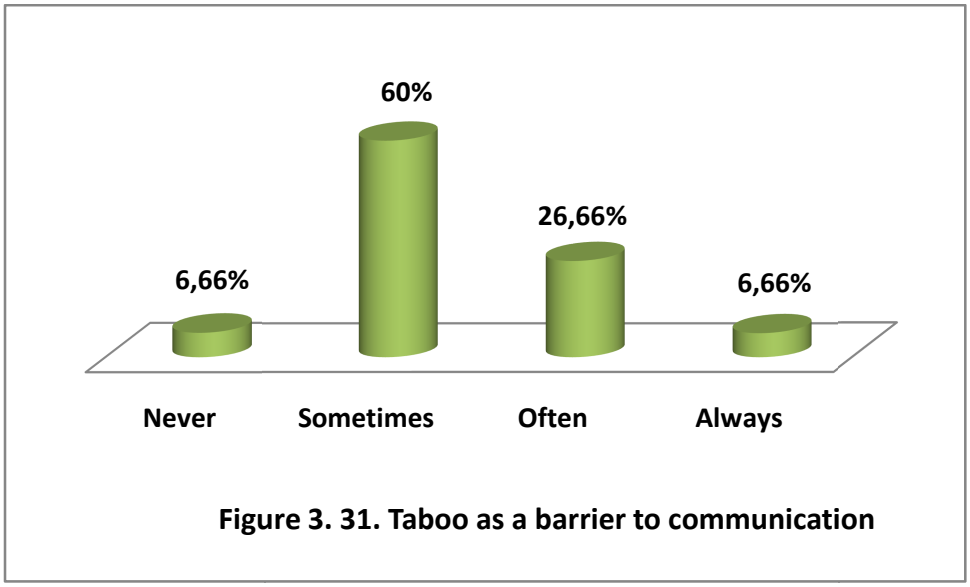

Figure 3. 31. Taboo as a barrier to communication

3.6.2.2.9. Socioeconomic status

The socioeconomic status includes different attributes which may either enhance or hamper communication between physicians and patients. Doctors complained that the majority of the Algerian population had a very low intellectual level and suffer from a serious deficit in health literacy.

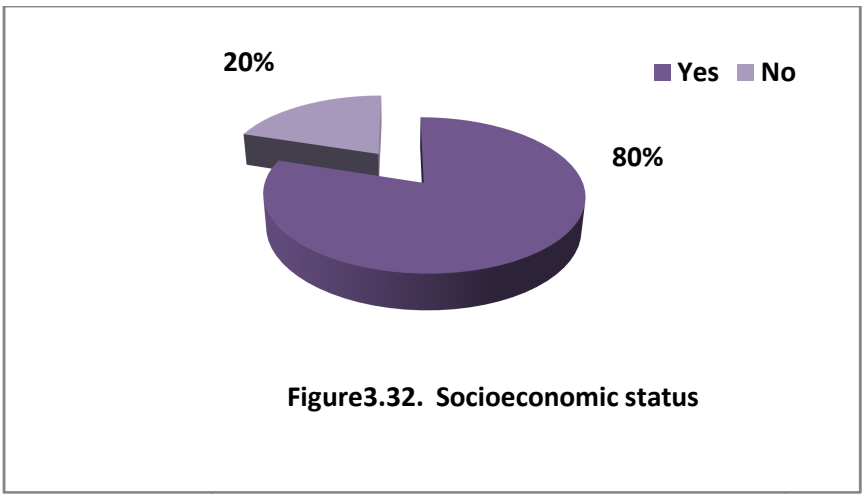

Figure3.32. Socioeconomic status

Most of them responded positively vis-à-vis this question. One male doctor wrote in a comment that it was very difficult for him to communicate with female patients. Others said that it was very hard to deal with very old patients and children because most often they did not talk, did not answer doctors' questions, and did not give enough information. Likewise, patients' financial circumstances limit healthcare access and can greatly affect D-P communication. When the patient cannot afford

doing tests at the private laboratories, they blame doctors for the unavailability of these tests for free at the hospital or for having asked to do them regardless of their importance. Consequently, this often leads to anger and dissatisfaction on both sides.

3.6.2.2.10. Studying medicine in Arabic

This question had the aim to explore the informants' opinion on the use of Arabic as a language of instruction and training of doctors to improve D-P communication. We asked patients and doctors the same question.

The largest majority (88,67 %) of patients believed that if medicine is taught, in Arabic in Algeria, there would be fewer problems of communication. Doctors would be able to use more Arabic words that patients could easily understand and it would even improve the patients' health knowledge. Only those who possessed good and excellent levels in French provided negative answers as they had positive attitudes towards French and stigmatised Arabic. In contrast, the majority of doctors (71,66%) rejected the idea. The major reason behind this opposition is the fear that it would lead to a negative impact on the quality of teaching, training and on medicine in Algeria as a whole.

Table 3.33. Studying medicine in Arabic: Doctors vs Patients

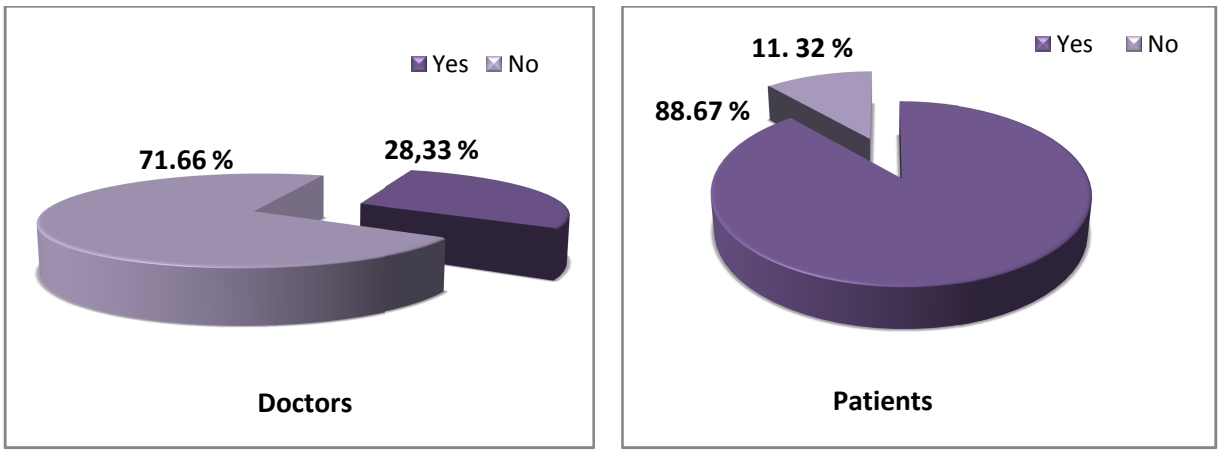

Figure3.33. Studying medicine in Arabic: Doctors vs Patients

In the discussion forums and the discussion that we held with doctors on facebook, the majority of doctors also resisted Arabic. They believed that French was the ideal language for medical studies. Moreover, they claimed for the integration of the English language in the medical curriculum since the new releases in medicine are nowadays only available in English. However, my question had to do with the possible advantages of the use of MSA on D-P communication it might be misinterpreted. MSA is a standard language that is closer to the mother tongue of the majority of Algerians than any other language. Further, in all developed countries and in many developing countries medicine is taught in their local languages regardless whether they are used internationally or not. In addition medical students take foreign language courses to cope with advancement and they provide high quality healthcare services. In Syria, Lebanon and Jordan, for example, medicine is studied in Arabic and it appears to be successful at both the educational and the communicative levels.

In a forum discussion a doctor provided a pertinent comment[41] on this issue:

I do not remember where I heard something like this, but a foreign professor who came to Algeria was shocked to discover that medicine, which together with justice, are the most important services of any society, is taught and practiced in a foreign language. It is true, we understand this, one thing is very important in medicine is the communication between patient and physician. And by the terms that we use to explain to patients what they have, they understand nothing. And sometimes we are forced to do a duplicated work: understanding and diagnosing in French and translating into

[41] Original Comment : Je ne me souviens plus où j'ai entendu ça, mais un professeur étranger venu en Algérie a été choqué de constater que la médecine qui constitue avec la justice les services les plus importants d'une société, s'enseignait et se pratiquait avec une langue étrangère. Et c'est vrai, on comprend ça, une chose très importante dans la médecine, c'est la communication entre le patient et le médecin. Avec les termes qu'on utilise pour expliquer aux patients ce qu'ils ont, ils comprennent que dalle et des fois, on est obligé de faire double travail: diagnostiquer et comprendre en français et traduire au patient en arabe et encore!! Si on y parvient. Sinon, on est obligé de lui dire de façon générale: c'est ton cœur ou bien c'est ton foie sans détailler. En plus, si c'était en arabe, on aurait nos propres chercheurs. Et puisque tout le monde n'est pas d'accord, on aurait pu commencer par une initiative en mettant une seule faculté de médecine en Algérie qui enseigne exclusivement en arabe et on verra laquelle donnerait de meilleurs résultats

Source : http://forumed.sante-dz.org/f31/en-quelle-langue-voudriez-vous-etudier-la-medecine-t16849/page8.html (10/03/2012)

Arabic to the patient again! If ever this can be achieved. Otherwise, you have to say in general: it is your heart or it's your liver without giving details.

In addition, if it was in Arabic, we would have our own researchers. Since everyone does not agree, we could have started with an initiative by a single medical school in Algeria that teaches exclusively in Arabic and see which one would give better results.

On the other hand, in the facebook discussion a doctor placed responsibility of the D-P communication failure on the disuse of Arabic in teaching medicine. He said: *I would not say it's the fault of French, but it's the fault of the Arabic language by which the medicine was not taught.*

Unfortunately, it is echoed that MSA is not consistent enough to be used in medical and scientific disciplines, however, it was clear from some patients' answers that MSA helped them understanding their health problems. Besides, recently a Saudi physician and a former Shoura Council Member Dr. Zuhair Ahmed Al-Siba'iy claimed that the Latin medical terminology does not represent more than 3,3% of the whole medical terminology[42]. This means that the majority of the medical terms are already available in the Arabic variety MSA.

3.7. Conclusion

Through mixing qualitative and quantitative research, this chapter has established that there is a wide gap affecting communication between doctors and patients in terms of language proficiency, education and socioeconomic status as a whole, although the majority of our sample population has at least a secondary educational level.

On the other hand, language differences greatly increase communication problems, especially with the presence of French as the language used in medical

[42] Source: http://www.saudigazette.com.sa/index.cfm?method=home.regcon&contentID=2009041134745 (12/05/2012)

domains. It was proved that patients with low proficiency in French have difficulties expressing their concerns verbally. They are less informed about their health condition as even doctors cannot always explain medical matters in plain language. They are eventually less satisfied than patients with a good proficiency in French. This latter may be problematic if it is misused. Furthermore, AA vocabulary is not well established to cover doctors and patients needs as regards medical vocabulary. It merely allows patients to get general information about their diseases or it can confuse doctors if they do not interpret it accordingly.

Finally, MSA which may bridge the gap between doctors and patients is severely opposed by doctors.

General conclusion

General conclusion

Studies on language use in D-P communication are largely marginalised in Algeria, despite the significance of effective communication in improving the quality of healthcare services. Arguably, in multilingual settings, linguistic barriers to D-P communication arise out of linguistic deficiency and the inappropriate choice of languages during medical examinations. Linguistic barriers are often associated with ineffective communication and compromises in health services.

This dissertation is built upon three major issues: to determine what languages are used by Algerian doctors and patients during medical encounters; to determine what effect language differences have on the quality of the medical examination; and lastly to establish whether French and medical jargon contribute to poor communication between doctors and patients, especially as Algerians still consider doctors as their primary source of information about their health condition. Thus, the main focus underlying this research is to throw some light on the interplay and the effect of the coexisting languages, particularly Arabic and French, on communication between doctors and patients.

Without claiming that we have carried out an exhaustive research work, this study is conducted to investigate empirically a sample population of two groups; physicians and patients. In order to make this research more valid and reliable and to bring out plausible answers to the research problem, a mixed research paradigm is undertaken. The mixed approach allows to yield, combine, and interpret data, as systematically as possible. A researcher-completed and a respondent-completed questionnaires are adopted to facilitate eliciting primary data from patients and doctors, respectively. The second means of collecting pertinent data is based upon participant and non-participant observation. This helps us validate and interpret the informants' answers. In addition, secondary data is gathered via the use of today's widely used web-based instruments such as discussion forums, online social networking services and emails. Finally, a widely used software program is utilised for

a statistical test which also makes a valuable contribution to our investigation. It helps determine whether there is a correlation between variables of the patients' degree of proficiency in French and satisfaction with D-P communication.

Based on the obtained results, we can maintain that in medical settings, owing to language variation and language differences, communication problems are becoming very pronounced and deserve investigation. This study has established that although AA is the most used variety by doctors and patients, the multilingual situation prevailing in Algeria is not without an impact on effective communication in healthcare settings. Differences in linguistic proficiency in French further enlarge the already existing gap caused by differences in the educational and socio-economic status between doctors and patients and make the D-P relationship more asymmetric.

Doctors do not deny that they use both Arabic and French to communicate with patients who also confirm it. Besides, the observational study reveals that French is used with nearly all patients regardless of whether patients can understand it or not. We could witness an apparent difficulty from doctors to use only AA as they have acquired to describe symptoms, diagnosis, and most of the medical procedures exclusively in French. The supreme power of French over Arabic in clinical environment has deeply influenced doctors' linguistic practices. They cannot be as informative as they could be without using French and the medical terminology. When dealing with patients with good and excellent levels of proficiency in French, the latter appears to be very helpful, it bridges the linguistic gap between doctors and patients and helps them all along the medical examination. It becomes problematic if it is used to address patients with limited or no proficiency in French. These patients do not fully understand their doctors; even worse they do not ask for clarification and translation. On the other hand, the statistical test shows that a close correlation exists between linguistic proficiency in French and patients' satisfaction with communication with doctors.

Furthermore, doctors do not only use French, they also use a great deal of jargon which is at the same time difficult to be understood by most patients whatever their educational or linguistic background is, and to be translated or paraphrased in a plain language by doctors. Actually, to fill this gap doctors and patients use AA and an adopted terminology, mainly used in traditional folk medicine, to refer to certain diseases and medical terms. However, this often results in an ambiguous language and causes confusion and misunderstandings between doctors and patients. When this language is used by doctors it makes them talk like traditional medicine practitioner and, consequently, it can incite patients to use traditional treatments.

Another assumption is that although it might seem that doctors and patients are not aware enough about the problematic linguistic situation that prevails in Algerian healthcare settings, they both agree on finding difficulties in expressing their thoughts and concerns, and to fully understand each other.

Surprisingly, MSA the standard and formal variety that can considerably narrow this gap, especially since it can be understood by most patients as practically most of them have at least a secondary and university educational level, is largely marginalised and stigmatised. Hence, some questions keep arising again;

- Why do we still depend on our former coloniser's language half a century after independence, especially in the medical and scientific domains?
- On what educational basis is MSA still believed to be imperfect for medical and scientific disciplines?

Broadly speaking, this research has used to a large extent an ethnographic approach; it primarily focused on examining D-P communication at the macro level. Yet, like any piece of research it obviously remains restricted as it does not cover the current issue from all its facets. An in-depth exploration through the use of a conversational analysis which consists primarily of audio and visual recording to study linguistic practices may be applied in future research to further explore patterns of language choice in doctor patient communication.

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Summary

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A Sociolinguistic Study of Communication and Language Barriers In Algerian Health Care Settings

Summary of a dissertation submitted to the department of English in candidacy for the Degree of MAGISTER in Sociolinguistics

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In healthcare settings, in spite of the technological development and the use of modern medical devices to help diagnose and treat diseases, doctors and patients still depend on each other to identify and treat illnesses. The interpersonal communication remains indispensable to get their messages across. However, if they don't use the same language, the clinical outcomes may not be always satisfactory. Either the patient will be unable to effectively communicate his or her pain, fear and concerns, or it is the doctor who will meet difficulties to understand the patient, to clearly explain the nature of the diagnosed disease and its causes, and to provide the patient with the necessary recommendations about the treatment.

Language is by all means the most primarily ingredient of the process of interpersonal communication. Accordingly, it is the fundamental of all tools upon which both doctors and patients rely to make sense of the medical encounter and to exchange information. This explains why there is an increasing orientation of a large number of researches in social sciences and other disciplines towards communication and language use in doctor patient relationship and their effect on the medical outcomes. They are getting more aware about its importance as it is widely accepted that any health service process requires linguistic interaction between a service provider and a service seeker. So, the use foreign and intricate language would cause breakdowns in communication which would lead to great deficiencies in terms of health services, trust and satisfaction. Through language, doctors and patients express their thoughts and concerns to get full knowledge about the patient's condition and disease history. In other words, language is used to get information about social backgrounds, medical and surgical antecedent history. This allows the doctor to identify the problem, to make an accurate diagnosis and to involve the patient by discussing the medical treatment to take decisions. Thus, if linguistic problems occur during the encoding and decoding stages of communication process, the message transmission will be affected and the intended meaning will be altered. This would, eventually, lead to dissatisfaction as it can weaken trust or it can even be a causative factor of medical errors in some cases.

Indeed, it is very important to realise that in a context of a crucial importance such as healthcare, the use of intelligible language with a good choice of words increases access to information. In multilingual contexts, it is likely that language disparities impact communication between doctors and patients. On the other hand offering an appropriate translation is not an easy task but it is considered vital to the success of the medical interview. Among the linguistic hurdles that may affect the quality of health services, illiteracy, lack of proficiency in languages used by doctors and patients and the use of a highly technical language are the most critical.

In Algeria, patient with little or no proficiency in French and limited health literacy might receive a poorer quality of healthcare services, because physicians in Algeria are taught and trained, exclusively, in French which is the language of instruction of most scientific disciplines. As a result, doctors and medical students become deeply influenced by French and the medical jargon in their linguistic behavior. They are likely to meet difficulties to use an intelligible language free of French and jargon when dealing with patients with low educational and social backgrounds. Hence, patients may not understand their doctors and follow their instruction. They may all the same confuse doctors if they misuse French or jargon. Besides, we know that the large urban cities of Algeria often attract people of different linguistic and socio-cultural backgrounds from the rural areas and far towns to receive better health services. Doctors and patients may use some words and expression from the local Algerian varieties that are mutually unintelligible and result in situations of full confusion.

Actually, in this study we want to examine communication problems that are induced by the coexistence of several language varieties in Algeria. Focus will be mainly on the relevant issue that while there is an overall bilingualism among doctors due to historical and educational motivations, patient are not all bilinguals because of social, political, cultural, and regional factors.

Moreover, the medical context requires doctors to use a specific register that is characterised by the use of French and medical jargon. It is not evident to find

immediately equivalents of highly medical technical terms in the local non-standard varieties. The extent to which doctors are able to accommodate to their patients by using, reducing or avoiding completely French and jargon, during their interactions with patients, will be part of this research.

In order to specify the discussed topic issue we would like to formulate the problem of this investigation as follows:

- What languages do doctors and patients use during the medical examination?
- What is the effect of language differences on communication between physicians and patients?

- Do French and the medical jargon contribute to a poor communication between doctors and patients?

- We hypothesise that the actual situation of unbalanced societal bilingualism and the complex linguistic diversity prevailing in Algeria is creating linguistic barriers that affect communication at healthcare settings in Algeria. Particularly, patients with little or no proficiency in French are less satisfied with communication with their physicians and they receive less information than patients with good level of proficiency in French.

- The primarily purpose of this study is to identify the linguistic communication problems. To this end, other objectives are put forward. First, we examine the sociolinguistic characteristics and backgrounds of patients and doctors then we attempt to identify patterns of language use at healthcare settings. The second objective is to identify the linguistic barriers that cause misunderstanding and misinterpretation during medical examination. A final objective is to test patients' satisfaction with doctor patient communication.

To this end, the present research is structured in three chapters, each of which corresponds to a specific purpose as follows:

The first chapter is theoretical; it starts by an outline of notions and concepts in relation to the study. Then, it offers an overview of the pervious literature of researches on language in doctor patient communication and factors of misunderstandings. The second chapter is devoted to present the circumstances under which a complex multilingual situation is shaped. It sheds light on the existing linguistic break, between members of the Algerian community, caused by unequal distribution of language varieties. We developed, then, in the third and last chapter the methodological aspects of this research framework. It deals with our fieldwork that we carried out at public and private medical sectors. It considers the multiple means used in collecting and analysing data to extract evidences and test our hypotheses. We examined and compared aspects of language use between doctors and patients

thoroughly via questionnaires, interviews and observations in real situations of medical practices. A statistical test and other secondary instruments are also used to maintain a cross-examination of communication at healthcare settings.

The term 'communication' comes from the Latin word *communicare* meaning 'to share' or 'to make common' and it is etymologically related to both 'communion' and 'community'. DeVito (1986: 61) notes in his writing that communication is 'the process or act of transmitting a message from a sender to a receiver, through a channel and with the interference of noise'. Other scholars give other detailed definitions, expanding that the message transmission is a deliberate act to convey meaning. Canale (1983:04) provides a definition of communication as 'the exchange and negotiation of information between at least two individuals through the use of verbal and non-verbal symbols, oral and written/visual modes, and production and comprehension processes'. In other words, Communication refers simply to the transmission of a message from a sender to a receiver in an understandable manner[43].

However, it is worth mentioning that communication is always referred to as a process which guides individuals who are involved in the communication activity. It is a dynamic and a continuous activity which is always changing and always in motion (DeVito, 1986: 239). Communication is said to be taking place when the sender and receiver are sharing meanings. Effective communication leads to understanding, consequently, a person that follows the communication process will be more successful and productive in any professional situation.

Effective communication has a great importance in both professional and social life. From a professional point of view, effective communication is absolutely crucial in any kind of profession, i.e., effective communication is very important for successful interactions with people of different backgrounds.

There are many types of communication, but to delimit the scope of our study we shed light only on interpersonal communication and linguistic communication.

Interpersonal communication has to do with relationships between people. It usually happens in face-to-face interaction and any relationship is primary created, maintained, or changed through interpersonal communication. Roloff (1981: 30) states that 'Interpersonal communication is a symbolic process by which two people bound together in a relationship provide each other with resources or negotiate the exchange of resources.'

Put simply, interpersonal communication can be defined as any verbal or non-verbal message transmission between two people or more. Scholars on the other hand define it by distinguishing it from other types of communication with regard to some criteria, in particular the following:

- the number of participants is usually small;
- the participants are usually in close physical proximity to one another;
- the use of sensory channels,
- the participants are usually able to provide immediate feedback.

Verbal communication or Linguistic communication

Verbal communication is a specific ability to human kinds. It is based on the use of speech sounds, words, utterances, (and letters in written discourse), etc., i.e., the use of either spoken or written natural language. Hence, written communication messages are conveyed through written forms such as letters, texts, bills, reports, etc., while, oral communication basically relies on the use of speech and hearing organs that people are equipped with and which are responsible for the production and perception of language. Messages may be in different forms of speech in conferences, appointments, group discussions, telephone conversation, etc., It represents the most usual mode of linguistic communication for human beings.

Communication has always been examined theoretically by using models. These models help understand the nature of the process of communication and its elements.

In order for any scientific research to stand more reliable and objective it should follow a certain research methodology paradigm; it is either quantitative approach,

qualitative approach or a mixed approach. Quantitative research relies mainly on the collection of data through structured methods such as structured observation, questionnaires, surveys and interviews in which basically closed-ended question are used. On the other hand, qualitative research uses ‘ research questions and semi-structured methods such as open-ended and in-depth interviews, ethnographic field notes, focus groups, open-ended questions on surveys, and participant observation.’(Sarbani Kattel, 2010: 25). The third type, mixed research, also known as triangulation, involves characteristics of both quantitative and qualitative paradigms. It uses elements, techniques and concepts of both methods in a single study so that diverse perspectives cast light upon the topic under investigation. Indeed, triangulation in research is by no means aiming at replacing either of qualitative or quantitative approaches. Rather, it attempts to draw from their strengths to minimize their weaknesses in particular study or across studies (Johnson et al., 2004: 14-15). In addition, Rossman and Wilson (1985, 1991) assert that using mixed approaches has three broad advantages. First, it allows the researcher to inspect and confirm data through the use of multiple research perspectives and tools. Second, to elaborate and develop a thorough analysis which yields more valuable details; and third, to improve the researcher’s awareness and provides a better insight to deal with conflicts and paradoxes between the two data sources. (*in* Vitale *et al*., 2008: 90).

Some preliminary data was gathered before fieldwork was carried out. This occurred through observation, experiences and personal stories told by some family members and friends. Our field work in medical settings was carried out from mid-March to mid-April.

The task of a researcher, during data collection, is to stay close to his or her informants i.e., the researcher should spend a period of time in the environment where the phenomenon in question is taking place. Aikhenvald (2007: 5) emphasises that an ideal field involves ‘observing the language as it is used, becoming a member of the community, and often being adopted into kinship system’ (*in* Chilliah *et al.*, 2011: 7), in other words, fieldwork is a personal experience in which the researcher lives with

the informants and learns their social customs and behavior through various types of data collection methods.

To accomplish our study we performed different tasks. First, in order to obtain a legal permission from the Head of the Pedagogical Activities (HPA) of CHU of Sidi Bel Abbes (SBA) to allow us to conduct our research in the hospital, we got a permission request letter from the head of the English department of Tlemcen University. At the beginning, the assistant director granted us a permission to conduct our research in three departments that were: Internal Medicine, Endocrinology and Diabetes and The department of Emergencies for a period of time of 10 days in each department starting from the 19th march 2012. However, one week later we have been withdrawn the permission in the third service as its head refused to allow us carrying out our study there claiming that very little communication occurred at emergencies and that doctors were always very busy to provide patient with immediate care so they could barely talk with them. Another doctor who was also present said that emergencies were not the ideal service to undertake a research on communication. But of course if we were allowed to conduct research there and hold some observations in a high pressure and stress work service such as emergencies, this would be very beneficial to yield evidences about communication failure and it major causes. Hence, the HPA granted us another permission in an outer department, SCU and allowed us to conduct our research in all its services. The majority of the interviews with patients were conducted in this department when they were waiting for their turns or for their doctors. Other interviews with patients were carried out in the private sector in three offices whose physicians accepted to interview their patients if the latter accepted too. They were two gynecologists and one gastrologist. While questionnaires and interviews with doctors took place in three areas, the hospital, the SCU and in some private physicians' offices. Besides, access into the hospital and the SCU gave us the opportunity to make a number of relevant observations and to record significant information on patterns of language use in a health care setting, in our research dairy. Additionally, some questionnaires have been administered online via Facebook and emails.

Studies on language use in D-P communication are largely marginalised, in Algeria, despite the significance of effective communication in improving the quality of healthcare services. Arguably, in multilingual settings, linguistic barriers to D-P communication arise out of linguistic deficiency and the inappropriate choice of languages during medical examinations. Linguistic barriers are often associated with ineffective communication and compromises in health services.

This dissertation is built upon three major issues; to determine what languages are used by the Algerian doctors and patients during medical encounters, to determine what effect language differences have on the quality of the medical examination, and lastly to establish whether French and medical jargon contribute to a poor communication between doctors and patients, especially as Algerians still consider doctors as their primarily source of information about their health condition, thus, the main focus underlying this research is to throw some light on the interplay and the effect of the coexisting languages, particularly Arabic and French, on communication between doctors and patients.

Without claiming that we have carried out an exhaustive research work, this study is conducted to investigate empirically a sample population of two groups; physicians and patients. In order to make this research more valid and reliable and to bring out plausible answers to the research problem, a mixed research paradigm is undertaken. The mixed approach allows to yield, combine, and interpret data, as systematically as possible. A researcher-completed and a respondent-completed questionnaires are adopted to facilitate eliciting primary data from patients and doctors, respectively. The second means of collecting pertinent data is based upon participant and non-participant observation. This helps us validate and interpret the informants' answers. In addition, secondary data is gathered via the use of modern technological instruments such as discussion forums, online social networking services and emails. Finally, a widely used software program is utilised for a statistical test

which also makes a valuable contribution to our investigation. It helps determine whether there is a correlation between variables of the patients' degree of proficiency in French and satisfaction with D-P communication.

Based on the obtained results we can maintain that in medical settings communication problems owing to language variation and language differences are becoming very pronounced and deserved investigation. This study has established that although AA is the most used variety by doctors and patients, the multilingual situation prevailing in Algeria is not without an impact on effective communication in healthcare settings. Differences in linguistic proficiency in French further enlarge the already existing gap caused by differences in the educational and socio-economic status between doctors and patients and make the D-P relationship more asymmetric.

Doctors do not deny that they use both Arabic and French to communicate with patients who also confirm it, besides the observational study reveals that French is used with nearly all patients regardless whether they can understand it or not. We could witness an apparent difficulty from doctors to use only AA as they have acquired to describe symptoms, diagnosis, and most of the medical procedures exclusively in French. The supreme power of French over Arabic in clinical environment has deeply influenced doctors' linguistic practices. They cannot be as informative as they could be without using French and the medical terminology. When dealing with patients with good and excellent levels of proficiency in French, the latter appears to be very helpful, it bridges the linguistic gap between doctors and patients and helps them all along the medical examination. It becomes problematic if it is used to address patients with limited or no proficiency in French. These patients do not fully understand their doctors, even worse they do not ask for clarification and translation. On the other hand, the statistical test shows that a close correlation exists between linguistic proficiency in French and patients' satisfaction with communication with doctors.

Furthermore, doctors do not only use French, they also use a much deal of jargon which is at the same time difficult to be understood by most patients whatever their educational or linguistic background is, and to be translated or paraphrased in a plain language by doctors. Actually, to fill this gap doctors and patients use AA and an adopted terminology, it is mainly used in traditional folk medicine, to refer to certain diseases and medical terms, however, this often results in an ambiguous language and causes confusion and misunderstandings between doctors and patients.

Another assumption is that although it might seem that doctors and patients are not aware enough about the problematic linguistic situation that prevails in the Algerian healthcare settings they both agree on the finding difficulties in expressing their thoughts and concerns and to fully understand each other.

Surprisingly, MSA the standard and formal variety that can considerably narrow this gap, especially since it can be understood by most patients as practically most of them have at least a secondary and university educational level, is largely marginalised and stigmatised. Hence, some questions keep arising again;

- Why half a century after independence we still depend on our former coloniser's language, especially in the medical and scientific domains?
- On what educational basis is MSA still believed to be imperfect for medical and scientific disciplines?

Broadly speaking, this research has used to a large extent an ethnographic approach; it primarily focused on examining D-P communication at the macro level. Yet, like any piece of research it obviously remains restricted as it does not cover the current issue form all its facets. An in-depth exploration through the use of a conversational analysis which consists primarily of audio and visual recording to study linguistic practices may be applied in a future research to further explore patterns of language choice in doctor patient communication.

الملخص

في مجال الصحة,تتوقف الرعاية الصحية على التواصل الفعال بين المريض و الطبيب وذالك للتحصل على نتائج مرضية للطرفين .
يمكن أن تؤدي مشاكل في التواصل إلى تشخيص خاطئ أو علاج طبي متأخر أو غير مناسب. فمن المفترض أن سوء التواصل يقلل من جودة الرعاية الصحية و يؤدي إلى انزعاج و انعدام الثقة بين المريض و الطبيب .
تقدم الدراسة الحالية تقارير حول الحواجز اللغوية التي يتعرض لها المريض و المعالج خلال الفحص و التي تعود الى أسباب تاريخية ، سياسية، تعليمية، اجتماعية و اقتصادية التي شكلت حالة معقدة من التعددية اللغوية في الجزائر و نجمت عنها ثغرات لغوية بين أعضاء المجتمع خاصة في قطاع حساس كقطاع الصحة. حيث يتميز مقدمي الصحة باستخدام كثير للغة الفرنسية و مصطلحات طبية غالبا ما تكون غير مفهومة للإنسان العادي. في نفس الوقت يواجه الأطباء مشاكل في الفهم عند تعاملاتهم مع مرضى من مناطق جزائرية مختلفة، من خلفيات مختلفة و الذين يستخدمون لهجات مختلفة قد لا تكون دائما مفهومة.
الكلمات المفتاحية: التواصل ، الحواجز اللغوية ،تعدد و إختلاف اللغات ، الرعاية الصحية.

Résumé

En médecine, un soin médical satisfaisant dépend de la communication efficace entre les patients et les médecins. Une communication inefficace peut entraîner un diagnostic erroné, un retard ou un traitement médical inadapté. Il est supposé que la mauvaise communication réduit la qualité des soins et peut provoquer la colère ou le manque de confiance entre les patients et les médecins.

La recherche en cours relève de la communication et des barrières linguistiques que les patients et les médecins rencontrent lors des visites médicales à la suite des facteurs d'origines historiques, politiques, sociales, éducatives et économiques qui ont façonné une situation complexe du multilinguisme en Algérie. Elles ont, tout de même, créé des lacunes linguistiques entre les membres de la communauté algérienne. On suppose qu'il existe des obstacles linguistiques dans les milieux hospitaliers en raison de manque de compétence linguistique en quelques variantes linguistiques. Ceci dit, dans une société plurilingue telle que l'Algérie où les prestataires de santé sont caractérisés par l'utilisation d'un jargon médical et du français. Ces derniers sont susceptibles d'être incompréhensibles chez les personnes ordinaires. En même temps, les medecins sont souvent confrontés à des patients différents provenant de différentes régions ou de différents milieux et qui utilisent différents dialectes que les médecins ou prestataires de santé ne peuvent généralement pas comprendre facilement.
Mots clés : Communication – Barrières linguistiques – Multilinguisme – différences linguistiques – Domaine de la Santé.

Summary

In medicine, a satisfactory medical care depends on effective communication between patients and doctors. Ineffective communication can lead to misdiagnosis, delayed or inadequate medical treatment. It is assumed that poor communication reduces the quality of patients' care and can provoke anger or lack of trust between patients and doctors. The current research reports on communication and language barriers that both patients and physicians encounter during the medical examination as a result of historical, political, social, educational and economic factors that have shaped a complex situation of multilingualism in Algeria, and that have created linguistic gaps between members of the Algerian society.

We suppose that there are language barriers due to lack of linguistic competence in some language varieties, in our medical settings, as doctors are characterized by the use of medical jargon and French. These are likely to be unintelligible to ordinary people, at the same time, doctors are often faced with patients from different regions or different backgrounds and who different dialects that doctors or health providers generally cannot easily understand.
Key words: Communication – Linguistic Barriers - Multilingualism - Language differences – Healthcare settings.