

**PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA**  
**Ministry of Higher Education and Scientific Research**  
**Belhadj Bouchaib University - Ain Temouchent**



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**Language Barriers for Algerian Doctors educated  
in French: Overcoming Challenges in English-  
Language Conferences and Medical Research**

*An Extended Essay Submitted in Partial Fulfillment of the Requirement for a  
Master's Degree in Didactics and Applied Languages*

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Academic year: 2024/2025

# Dedications

*Ahmed*

*My beloved parents,*

*Who have been my source of inspiration,*

*Who gave me strength when I thought of giving up,*

*Who continually provided moral, and emotional support.*

*My dear brother “**Mohamed Amine**”, and my sisters*

*My nephews “**Madjid**” & “**Abdelhak**”, my nieces*

*My friends and colleagues who helped me*

*This work is wholeheartedly*

*Dedicated to you.*

## **Dedications**

*In the name of Allah, the most gracious, the most merciful.*

*All praise is due to Allah, for gave me the patience, strength, and faith to walk through this journey and complete this chapter of my life.*

*With all my heart, I dedicate this work to my beloved family, your big support, love and prayers have been the pillars that carried me through every challenge., Know that making you proud is my greatest goal.*

*To the two souls who are no longer with us, but forever live in my heart. Without them I wouldn't be the person I am today.*

*To my soul twin Ferial, my constant light you've stood by me in ways words can never truly express. To my heart sister sihem, Bissou your support, kindness and presence have meant the world to me. Always remember i will always be grateful that you are in my life.*

*And finally, to everyone who offered a kind word, a helping hand, or a moment of their time during this journey. May Allah bless you all.*

***Nesrine***

# Acknowledgments

*First and foremost, we would like to express our deepest gratitude to Allah for granting us the strength, patience and guidance to complete this work successfully.*

*Our sincere gratitude and appreciation go to our supervisor, **Mr. Benguerfi**, for his continued support and encouragement. His trust in our capabilities motivated us to put forth our best efforts and to remain committed to producing work of high quality.*

*My gratitude goes also to the members of the jury for generously offering their time to examine and evaluate my work. I would also like to thank them once again for their interest and insightful comments **Dr. FEHAIMA Amaria** and **Dr. BOUMEDIENE Amina**.*

*Special thanks to ourselves for staying patient during the most challenging moments.*

*Last but not least, we would like to thank all the Doctors who took part in this study.*

## **Abstract**

Algeria is characterised by its cultural and linguistic diversity including: Arabic, French and English language as a result of the colonization. The dominance of English language across different fields and its presentation as the language of science and knowledge, has drawn Algeria`s attention to adopt it as a second language in the country. However, in the medical field, doctors suffer from language challenges that prevent them from reaching the latest international research. In this context, this research attempts to investigate how language barriers hinder their participation in English-language professional contexts such as medical conferences and accessing up-to-date medical research. It explores strategies to overcome these barriers, facilitating better integration into international medical discourse. A mixed method approach was applied in which online questionnaire and three interviews used to collect reliable data. The sample population was 60 doctors from various cities in Algeria, specifically Oran, Algiers and Annaba`s Faculty of Medicine. The findings have revealed that language barriers impact the productivity of Algerian doctors educated in French while attending English language medical conferences and their ability to access the latest international research. In the conclusion of this investigation, to overcome this gap, some recommendations are suggested in order to aid the Algerian doctors navigate today`s English-dominated medical landscape, and overcome the barriers to improve their contribution to global medical research. This research is a significant addition to the field of English for specific purposes.

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## List of Acronyms

**EFL:** English as a Foreign Language

**CBA:** Competency-Based Approach

**ELT:** English Language Teaching

**ESP:** English for Specific Purposes

**EAP:** English for Academic Purposes

**EOP:** English for Occupational Purposes

**EVP:** English for Vocational Purposes

**VESL:** Vocational English as a Second Language

**EMP:** English for Medical Purposes

**TBL:** task-based learning

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# **General Introduction**

## General Introduction

Language serves as an essential tool of communication among people and different societies through sounds and verbal forms, used to share ideas and beliefs, and to develop cultural and economic links. In preceding years, the world has witnessed a qualitative development and attention towards the English language, which has evolved and emerged as the international language/ lingua franca. An international language, cross-cultural language or global language is the common linguistic tool between people who did not share the same mother tongue language.

In Algeria, the wide cultural diversity requires a multilingual approach, in order to benefit from all the languages that exist within it. This linguistic diversity can be traced back to several reasons. For example, the mother tongue or L1 is Arabic or Algerian Arabic, another reason is the French colonisation, France occupied Algeria for a long period (132 years). During these vast years, the coloniser not only aimed to plunder the land but also the minds and culture of the country by Frenchifying the educational and cultural systems. France sought to establish a new state, French Algeria (Algerie Francaise). After independence and liberation from French colonialism, French language continued to control several sectors, such as science, higher education and technology. This led to divisions among the Algerian people, as some see French language as the language of prestige and culture, while others want to support their mother tongue (i.e. Algerian Arabic) or at least adopt a new global language for Algerian society.

Following these events, a foreign language began to appear in Algeria, namely English. This language gained great popularity, especially among young people, as they see it as a tool of social communication that provides them with valuable opportunities on the professional and academic levels. English language was first introduced as a subject in middle and secondary

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schools in 1993, but after the strong focus on the English language, the Ministry of Higher Education encouraged the use of English especially in scientific research and technology, and provided all available means for this process, considering English to be the key to academic access and global opportunities. The English language introduces as the language of science through which knowledge is developed and conveyed, primarily in different fields such as medicine, natural science or physics. English language proficiency enables researchers to find powerful sources for gathering information, attend meaningful English forums and contribute to the latest innovations and development.

This study seeks to examine the medical field in Algeria. Despite the changes the country has undergone at all levels, especially linguistically, doctors still face significant language difficulties. Algerian Doctors completed their studies in French and use purely French scientific and medical terminology, only to be confronted with the opposite reality while attending English-language professional contexts such as medical conferences and accessing up-to-date medical research.

These language challenges could be overcome through different strategies, including access to language teaching for specific purposes (ESP), these courses were created specifically to develop the communication aspects of a group of individuals who share the same field and to achieve their goals more efficiently. In this context, English for medical purposes (EMP) came to exist to meet those tailored requirements. It deals with the linguistic and communication needs of healthcare professionals that can enhance their integration into the global medical community.

Based on the topics covered, this study aims to investigate how language barriers hinder the participation of Algerian doctors educated in French in English-language professional

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contexts such as medical conferences and accessing up-to-date medical research, and explores strategies to overcome these barriers, facilitating better integration into international medical discourse. In addition, the objectives of this research are:

- Assess the English proficiency of Algerian doctors educated in French and its impact on their participation in English-language medical conferences and research.
- Identify the challenges those doctors encounter in English-language settings.
- Evaluate strategies used by those doctors to overcome language barriers and propose recommendations to improve their English proficiency.

Accordingly, this research aims to find answers to the following questions:

- To what extent do language barriers affect Algerian doctors' performance in conferences and medical research?
- What are the main challenges faced by these doctors in English language conferences and medical research?

To respond these questions, the study suggests the following hypotheses:

- Language barriers significantly affect the performance of Algerian doctors, educated in French, during English-language medical conferences and their access to up-to-date research.

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- Limited English proficiency and complex specialised vocabulary could be the main barriers faced by the Algerian doctors in the medical conferences and research.

To tackle these research questions and test the presented hypotheses, the researchers segmented the work into three main chapters.

The first chapter is theoretical background devoted to provide an overview of the linguistic diversity in Algeria and the shift from French to English language, and analyzing their impact on medical domain and practice. Moreover, it explores English for specific purposes and especially English for medical purposes (EMP). Furthermore, the chapter uncovers the linguistics barriers and obstacles faced by the Algerian doctors in acquiring medical English, then finally examine relevant studies. In this Literature review the researchers opted for a mixed approach as it blends both the **thematic** approach and the **funnel** approach, the researchers organised the content thematically around topics such as EFL, ESP, EMP (thematic), and then went in depth in those themes from general to specific (funnel).

The second chapter presents all the methodological procedures that have been designed in this study, which took place in Algeria with doctors across the country. It reviews the research objectives, research design, research approaches, settings and participant sample. Furthermore, to improve the validity and reliability of the work, the researchers adopted a mixed method approach where an online questionnaire and three interviews were the primary means to collect data. Additionally, this chapter explains the method used to analyze the data, taking into account the procedures used to ensure the credibility of the investigation.

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The third chapter is dedicated to the analytical part of this study, beginning with introducing the obtained data from the questionnaire and the interviews, subsequently; the findings were analysed, discussed and interpreted. Then, at the last part of the thesis, the researchers provided suggestions and recommendations for improvements based on the findings obtained in the present study.

**Chapter One Literature  
Review of English  
Language Barriers for  
Algerian Doctors**

### **1.1 Introduction**

Learning a Foreign language expands professional opportunities across different fields, including business, marketing, law, medicine, technology ... etc. Particular, the medical field, where specialized academic terminology is used in international conferences, is contingent upon having a considerable proficiency level in the English language. In Algeria, doctors face significant challenges when participating in English language speaking conferences and medical research chiefly due to their French educational background. To elucidate the current situation in the country, this chapter aims to explore the status of both the French and English languages in Algeria as well as analyze their influences on medical education and the professional practice. Additionally, it will generally examine English for specific purposes (ESP), particularly English for Medical purposes (EMP). The chapter also seeks to shed light on the challenges doctors face in acquiring medical English, discuss language barriers in professional settings, and review relevant studies.

### **1.2 Status of Non-Native Languages**

Algeria, like many other multilingual countries, is characterized by its complex linguistic diversity due to significant historical and economic factors. Despite the interlanguage competition, Algerians predominantly exhibit positive attitudes toward the various languages present in the country. Arabic, French and English each serve an active role within the society, and the individuals' majority realizes the importance and effectiveness of linguistic diversity as Arabic symbolizes national and cultural identity. French serves the educational and professional domains and English is sought for global engagement and communication. The following represents the status of each within the country.

### 1.2.1 Status of French language in Algeria

As a colonial history in our country, the French language has been a continual source of influence on Algeria's language profile. Post over 130 years of French occupation (1830–1962), The colonial rulers decided that French is the certified language in administrations, schools and cultural practices (Benrabah, 2013, pp. 194–195). Despite attaining independence in 1962, French preserved its authority within elite and the intellectual class as a symbol of power and economic progress worldwide connection (Grandguillaume, 1983).

After independence, Algeria preserved Arabic as its official medium of communication to validate the Arabic and Islamic identity. Nevertheless, France continued its control over many sectors such as education, commerce and the media. This situation created a diglossic environment where the two languages endure together within the same setting but assist different purposes (Boukous, 1995 p.45). This bilingualism reflects a broader pressure between Arabic and the need for French in a globalised world (Benrabah, 2013 p.90).

In the past few years, the importance of the French language has shifted under the transformation of globalization, economic strain and pedagogical improvements. While French is still regarded as the language of prestige in the country, its influence has been struggled by the spread of English as a global lingua franca. In addition, the growing emphasis on Standard Arabic and Amazigh (Tamazight), this was recognized as an official language in 2016. Notwithstanding, French remained the medium of instruction in higher education and scientific fields, which reflects its institutionalized role (Mostari, 2004).

The younger generations have indecisive attitudes toward the French language. While some view it as a colonial remanence, others consider it as an access tool for international opportunities (Belmihoub, 2018). The linguistic duality highlights the complex interplay between

## Chapter One: Literature Review of English Language Barriers for Algerian Doctors

identity, history, and pragmatism in the Algerian linguistic landscape. In general, French remains a significant but debated language in Algeria, which reflects the country's continuous, balanced effort between its colonial past and global future.

In Algeria, French is the dominant language in medical education, particularly in universities and hospitals. Algerian doctors from the time they obtain their baccalaureate until their graduation, healthcare professionals consistently use the French language during their academic and professional journey, due to the reasons mentioned previously. Almost all scientific and medical papers, existing research and medical terminology are in French, which creates a linguistic issue. It creates a complex situation which prevents them from accessing the latest medical research which is increasingly based on English, the language of science. This illogical use may affect their attendance and interaction at international medical conferences.

### **1.2.2 Status of English language in Algeria**

Over the past few decades, the status of the English language in Algeria has evolved significantly, influenced by globalization, educational reforms, and socio-political changes. In the historical retrospection, French has dominated as the second language due to Algeria's colonial past, but English has been increasingly recognized as a language of convenience for international communication (Benrabah, 2013 p.90). As English helps to access global knowledge and gain international opportunities, The authorities see it as an important tool for modernization as Rouabah mentioned "The Algerian government has increasingly recognized the importance of English in global trade, science, and technology, which led to its inevitable inclusion in educational curriculums at various levels" (Rouabah, 2022 pp. 21–40).

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English is often perceived as a neutral language in Algeria, unlike French, which carries colonial connotations. This perception has contributed to its growing popularity among the young generation. The latter views English as a tool for social and career advancement and access to global networks (Maraf&Ulker, 2022). The rise of digital platforms and social media has further accelerated the spread of English, as young Algerians engage with English-speaking online communities and consume English-language media.

In the educational sector, English was introduced as a mandatory module in middle and secondary schools in 1993, and its presence has since expanded to higher education as a subject. However, challenges remain, including a lack of qualified teachers, inadequate resources, and the dominance of French in academic and professional settings (Amara, 2025). Despite these obstacles, English is increasingly seen as an access key to international scholarships, employment opportunities, and academic research.

The Algerian government's recent decision to adopt English as the primary foreign language in primary schools starting from the 2022-2023 academic year marks a significant shift in language policy (Djebbari&Djebbari, 2020). Such calculated move reflects a broader strategy in the aims of reducing the reliance on French and aligns Algeria with global trends that favor English as the lingua franca of science, technology, and business.

### **1.2.2.1 EFL Teaching in Algeria**

Influenced by historical, cultural, and educational factors, EFL teaching in Algeria has undergone changed significantly over the years. The introduction of English during the French colonial period was limited, yet after independence, English gained prominence as a global lingua franca (Benrabah, 2013). This indicates that after gaining independence, English language

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took root in Algeria as it is widely used international language. Despite its growing importance, EFL teaching in Algeria faces challenges such as overcrowded classrooms, insufficient resources, and a lack of trained teachers (Boukadi&Troudi, 2020). The Algerian educational system has traditionally favored French, which has created a linguistic imbalance and hindered the development of English proficiency.

Recent reforms, such as the introducing of the Competency-Based Approach (CBA), aim to improve EFL teaching by focusing on communicative competence and learner-centered methodologies. However, the implementing of these reforms has been inconsistent, with many teachers relying on traditional grammar-translation methods (Benabed, 2011). In addition to that, the use of technology in EFL classrooms remains limited, despite its potential to enhance learning outcomes.

Cultural factors also play a role in EFL teaching, as Algerian students often struggle with the cultural content embedded in English textbooks, which may not align with their local context (Dahda&Hocine, 2020). Additionally, the lack of exposure to authentic English language environments outside the classroom further complicates language acquisition. Despite these challenges, there is a growing recognition of the importance of English for academic and professional opportunities, leading to increased demand for EFL instruction.

### **1.3 English for Specific Purposes (ESP): A targeted approach**

English for Specific Purposes (ESP) is a tailored approach to language learning that came to be in fulfillment of the specific needs of learners in their professional or academic fields. As a targeted approach, ESP courses are designed to enhance communication skills relevant to a particular industry or discipline in order to help learners achieve their goals more efficiently. To grasp both the concept and approaching, it is essential to start by the definition.

### 1.3.1 Definition of ESP

Over the last fifty years, the definition of English for specific purposes (ESP) has developed either in theory or practice. This fact rendered providing a unified or an exact definition as difficult. In concurrence, Stevens (1988) advanced, “producing a simple and straightforward definition to ESP is not an easy task” (p. 109). A plethora of definitions were advanced by scholars that differ from one definition to another following certain conditions or circumstances, including, but not limited to, the current and future needs and objectives of the learners, the learners’ specific study area, the learners’ target jobs or careers, and the targeted linguistic skills.

In a broad definition, Mackay and Mountford (1978) defined the teaching of English for a “clearly utilitarian purpose” (p. 2). Alternatively, the teaching of English rises out of need and utility. It should target specific language skills through the use of real situations in such a way that enables the use of English to fulfill special needs that range from academic, occupational, to scientific. Mackay in Robinson (1991) added that ESP is “normally goal-directed” (p. 2), meaning that the learning of English is not for the sake of learning the language but for specific goals that are real-world oriented.

More specifically, Hutchinson and Waters (1987) considered ESP as a subfield of English language teaching (ELT), where the chief concern is the learner’s needs. The pair argued that “ESP must be seen as an approach, not as a product. ESP is not a particular kind of language or methodology .... it is an approach to language learning, which is based on learner need” (Ibid.1987, p. 19). Accordingly, learners’ needs are the defining characteristic of the approach over which the teaching methodologies should be designed and developed. The subsequent section discusses the main characteristics of ESP.

### **1.3.2 Characteristics of ESP**

On the characteristics of ESP, Dudley-Evans and St. John (1998) proposed two broad categories under which the features or characteristics can either be “absolute “or “variable”, as follows:

#### **A/ Absolute Characteristics**

1. It is chiefly designed to meet the learners’ specific needs;
2. It uses underlying methodologies and activities belonging to the discipline it serves;
3. It centers around the language appropriate to the target activities, including grammar, lexis, register, study skills, discourse and genres of relevance.

#### **B/ Variable Characteristics**

1. It is discipline-specific as it might be designed for specific disciplines;
2. It is methodologically flexible as it might, in specific teaching situations, use methodologies that differ from that of General English;
3. It is targeting of learner groups often adult learners, either at tertiary institutions or in professional work situations with the adaptability possibility for learners at the level of secondary school;
4. It is oriented towards learners with intermediate or advanced language proficiency with the adaptability possibility for beginners;
5. Its courses generally assume some basic linguistic knowledge, yet it can be adapted to fit beginner learners.

ESP’s absolute characteristics are shared between its different branches while its variable characteristics vary from one branch to another. The overall observation is that these

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characteristics highlight ESP as an approach that is flexible and adaptable to different learning contexts, focusing on practical application rather than general language proficiency. The following section discusses the branches of ESP

### **1.3.3 Branches of ESP**

Concerning the branches of ESP, Hutchinson and Waters(1987, p. 17) delivered an illustrative tree of English Language Teaching (ELT) in which the two main types of ESP branches are at the second level in a top-down approach to course design. At this branching level, ESP is divided into English for Academic Purposes (EAP) and English for Occupational Purposes (EOP), which are recognized according to the learners need either for academic study or for work/training. The two heading types are detailed below.

#### **1.3.3.1 English for Academic Purposes (EAP)**

As an acronym, EAP stands for English for Academic Purposes. In terms of teaching context, Kennedy and Bolitho (1984) expressed that “EAP is taught generally within educational institutions to students reading English in their studies” (p. 04). Corroborating that is Hyland (2006), who defined EAP as "the teaching of English to enable learners to study in that language" (p. 1), which emphasized its role in facilitating access to academic discourse. In summative words, EAP is primarily focused on the equipping of learners with both language and skills necessary for academic success in English-speaking contexts.

On the type of skills, Jordan (1997) enumerated them by asserting that EAP involves "the teaching of writing, reading, listening, speaking, and study skills appropriate to academic study" (p. 3). Accordingly, learners are to engage in the development of the various linguistic skills that are likely to be needed to navigate their academic course. More specifically on skills, EAP

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focuses on the academic literacy by emphasizing the development of critical thinking, analytical skills, and the ability to synthesize complex information. The latter is also noted by Alexander, Argent, and Spencer (2008), who argued that these skills are essential for academic integrity.

About the educational level, Hyland (2006) further elaborates that EAP "focuses on the language needs of students in higher education, providing them with the tools to engage critically and effectively in their chosen fields" (p. 2). In his elaboration, Hyland highlighted the level at which EAP is generally opted for and needed, which is the higher educational level. In a precis, EAP is a specialized form of English language instruction designed to equip students with the linguistic skills tailored to the demands of higher education in order to succeed in the diverse English-speaking academic environments.

### **1.3.3.2 English for Occupational Purposes (EOP)**

As an acronym, EOP stands for English for Occupational Purposes. Also, it is referred to as English for Vocational Purposes (EVP) or Vocational English as a Second Language (VESL) (Hutchinson & Waters, 1987, p. 17). Here the language is designed to meet the specific needs in the professional environment. From an educational perspective, Kennedy and Bolitho (1984) expressed that, "EOP is taught in a situation where learners need to use English as part of their work professionally" (p. 04). Teaching is thus concerned with the language that is needed for the performance of professional or vocational roles and duties.

Comparatively with EAP, Dudley-Evans and St. John (1998) defined EOP as "The term EOP refers to English that is not for academic purposes, it includes professional purposes in administration, medicine, law and business and vocational purposes for non-professionals in work or pre-study work" (p. 07). In this definition, the distinction is made between the study of

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the specific language for the study in a particular field and the specific discourse for the practice in that field. In so doing, specific skills needed to perform both are cultivated.

On constituting skill development, EOP focuses on equipping learners with language skills tailored to specific workplace contexts. According to Hutchinson and Waters (1987), EOP "targets the immediate and practical needs of learners, enabling them to perform effectively in their professional roles" (p. 18). This includes developing technical vocabulary, as noted by Dudley-Evans and St. John (1998), who emphasizes that, "mastery of industry-specific terminology is crucial for clear communication in occupational settings" (p. 62). Moreover, EOP enhances interpersonal communication skills, such as negotiating, presenting, and writing professional emails, which are vital for workplace success (Basturkmen, 2010, p. 89).

In brief, EOP is also a specialized form of English language instruction tailored to meet the specific needs of learners in various professional fields. It focuses on the development of communication skills relevant to particular occupations, ensuring that learners can effectively perform job-related tasks. By integrating industry-specific vocabulary, scenarios, and contexts, EOP enhances workplace efficiency and global competitiveness.

### **1.3.3.3 EAP vs. EOP**

Opting for a comparative distinction between the two main types of ESP inevitably prompts mentioning the statement of Hutchinson and Waters (1987), in which they expressed that "This is, of course, not a clear-cut distinction: people can work and study simultaneously", adding that "it is also likely that in many cases the language learnt for immediate use in study environment will be used later when the student takes up, or returns to, a job" (p. 16). Dissecting

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the statement reveals the underlying connection between the two sub-branches and the inability to consider their polar opposites in practice.

That being acknowledged, the distinction between the two can be advanced in terms of the learner type, either a future, practicing student in opposition to a worker or employee (Robinson, 1991). "Accordingly, the key differentiating element is the learner type as well as the target context of use. While the first has specific needs that are addressed through EAP courses to meet the linguistics demands of academic contexts, the second also has specific needs that are addressed by EOP courses to meet the linguistic demands of a particular profession or occupation " (Hutchinson & Waters, 1987, p. 74). As a result, essential skills are developed within the learner by the two in which EAP develops study skills while EOP develops practical skills.

### **1.4 English for Medical Purposes (EMP)**

Considering that the healthcare professionals come from different educational and cultural backgrounds, they resort to English as a convenience lingua franca. Within mixed medical contexts, it is important to note that the linguistic repertoire required in medicine goes beyond general English proficiency (Ortega,Pérez, et al. 2019), prompting the need for specialized language that ensures effective communication among medical team members and patients. To this end, English for Medical Purposes (EMP) came to exist in response to these specialized needs and wants.

#### **1.4.1 Definition and Scope of EMP**

By definition, as a specialized branch of ESP, English for Medical Purposes (EMP) is concerned with the linguistic and communicative needs of healthcare professionals and students within medical contexts. Because medical professionals must possess both technical knowledge

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and practical language skills to interact with both patients and colleagues, EMP ensures that they are capable of both understanding and conveying medical knowledge in the English language (Dudley-Evans&St. John, 1998).According to Maher (1986), EPM “focus on a restricted range of skills which may be required by the medical learners” (p. 119), including, but not limited to, reading medical literature, writing patient reports, and engaging in doctor-patient interactions. To this effect, EMP serves as a bridge between language learning and medical practice, ensuring that healthcare professionals can communicate effectively in an increasingly interconnected world.

On scope, EMP extends beyond language proficiency to include cultural competence and the ability to navigate interdisciplinary communication in healthcare settings (Maher, 1986). As noted by Dudley-Evans and St. John (1998), EMP is not limited to vocabulary acquisition but also involves mastering the discourse conventions of medical texts and interactions. This is a fact that is particularly important in contexts where English serves as a lingua franca among healthcare professionals from diverse linguistic backgrounds. The increasing globalization of healthcare has further emphasized the importance of EMP, as effective communication is essential for patient safety and quality care.

Furthermore, EMP plays a crucial role in medical education, since it equips students with the language skills necessary to access and contribute to global medical knowledge (Hon, 2024). Research by Boshier and Smalkoski (2002) highlights the need for EMP programs to address both the academic and professional needs of medical students, including the ability to interpret research findings and communicate them effectively. Because EMP is not static, it evolves with the evolvment of both medical science and technology, requiring continuous adaptation of teaching materials and methodologies (Ursa, et al. 2018).

### 1.4.2 Teaching EMP

The teaching of EMP is a specialised field that requires a tailored approach to meet the needs of medical students and professionals. Antić (2016) noted that, "the content of an ESP/EMP syllabus is determined by the learners' reasons for learning English" (Abstract). This highlights the importance of understanding the learners' goals and integrating medical content into language instruction. EMP courses often focus on medical vocabulary and skills such as presentations, reports, and doctor-patient communication (Antić, 2016). In elaboration, Beitler (1982) expressed that, "Medical English teaching should not only focus on vocabulary and text analysis but also on developing communication skills, problem solving, as well as decision making" (p. 98). Accordingly, the integration of language and subject matter is that combination that allows learners to apply what they learn in English classes to their fields of study.

Methodologically, EMP teaching benefits from task-based learning (TBL) and role-playing scenarios by simulating medical interactions that allow learners to practice language skills in a controlled yet realistic environment (Dudley-Evans and St. John, 1998). EMP learners demonstrate improved confidence and accuracy when engaging with authentic materials, such as medical journals and case studies (Maher, 1986). Furthermore, integrating technology, such as virtual patient simulations and blended learning, has been shown to enhanced EMP learning outcomes and competencies (Asgari, 2015).

Despite the merits, EMP teaching encounters challenges that include the lack of standardized materials, teacher training, and varying proficiency levels among learners (Talha&Benhattab, 2022). To acquire discipline-specific English language skills, the courses often require collaboration between educators and medical professionals to ensure that the content is relevant and practical for the learners' needs (Ko, 2024). To ensure an effective EMP

## Chapter One: Literature Review of English Language Barriers for Algerian Doctors

teaching, Talha and Benhattab (2022) stipulate that teachers “are to be open to new approaches and methods, flexible, make decisions, and adopt to change” (p. 468). Accordingly, the success of EMP teaching depends chiefly on authentic materials, collaborative efforts, and innovative methodologies.

### **1.4.3 Importance of EMP in Medical Research and Conferences**

The importance of EMP in medical research and conferences has been underscored by its role as the predominant lingua franca. As the most solicited lingua franca for communication, either oral or written, English has dominated the research and publication in most domains, including the medical domain. In their estimation, field experts highlighted that ninety percent (90%) of the medical publications are written in English (Beitler& Mac Donald, 1982; Ramírez-Castañeda, 2020). In that, medical research and publications are their produced primarily in English or translated subsequently to English. English has become as the primary language for international medical meetings, textbooks, journals, and abstracting (Maher, 1986).

Following by the aforementioned, this status confirms the cruciality of EMP for medical professionals as most medical information is available in English, making proficiency in the language essential for career advancement and staying updated with the latest research. Using of English in medical research allows for effective communication and collaboration among international teams, facilitating the sharing of research findings and strategies. Conferences predominantly use English, highlighting its necessity for professional development (Pavel, 2021). Overall, proficiency in EMP is indispensable for medical professionals seeking to engage in global research and conferences.

### **1.4.4 Challenges in Acquiring EMP for Doctors Educated in French**

EMP acquisition presents significant challenges for doctors with the French educational background that stems from linguistic, cultural, and pedagogical barriers. Linguistically, the structural differences between French and English medical terminology often lead to miscommunication. For instance, the French medical lexicon frequently derives from Latin and Greek roots, while English terms may prioritize descriptive or colloquial usage (Ortega & Prada, 2020). This fact complicates accurate translation and might risk diagnostic errors. Additionally, syntactic differences, such as the reliance of French on nominalization versus the verb-based constructions in English, hinder clear patient communication (Dearden, 2016).

Culturally, French medical training emphasizes hierarchical doctor-patient dynamics, contrasting with English-speaking contexts that prioritize patient-centered communication (Napier, Depledge, Knipper, Lovell, Ponarin, Sanabria & Thomas, 2019). The result is a mismatch that creates challenges in adopting empathetic language, as French-trained doctors may struggle with phrases like "How can I assist you today?" instead of the more directive speech of their directive culture and education. EMP resources also often lack cultural relevance, focusing on Anglophone healthcare systems rather than addressing Francophone clinical realities (Tremblay, 2012). This oversight can lead to inadequate support and care for patients from diverse linguistic and cultural backgrounds, which exacerbating healthcare disparities.

Pedagogically, traditional EMP curricula rarely address the specific needs of French-speaking professionals, relying on generic language instruction rather than discipline-specific training (Belcher, 2009). This approach neglects the importance of discipline-specific training

## Chapter One: Literature Review of English Language Barriers for Algerian Doctors

tailored to their professional requirements. Psychological barriers, such as anxiety over accent stigma or fear of mispronunciation, further impede confidence in EMP use. The above challenges underscore the need for tailored EMP training that bridges linguistic gaps, integrates cultural competence, and employs interactive methodologies to support French-educated doctors in global healthcare settings.

### **1.5 Language Barriers for Algerian Doctors**

Language barriers pose significant challenges for Algerian doctors in their communication with patients. The healthcare system in Algeria is characterized by a multilingual environment, where French, Arabic varieties, and Berber dialects coexist. However, French remains the predominant language in medical settings due to its historical influence and the fact that medical education is conducted exclusively in French. As a direct result, this creates a linguistic gap between doctors, who are more comfortable using French, and patients who may not be proficient in the language (Belaskri, 2017). This situation can lead to misunderstandings and misinterpretations of medical conditions. The lack of proficiency in French among patients can result in poorer healthcare outcomes and reduced patient satisfaction.

On the other hand, despite being an international language, English is not widely adopted in Algerian healthcare settings, partly due to a lack of training and medical terminology in English (Ammari, 2022). Because a significant number of Algerian doctors are more comfortable with French, this might lead to potential communication difficulties in international settings. The linguistic barriers are apparent at the levels of research conduction, conference participation, and intercommunication. The complexity of language barriers in Algeria underscores the importance of addressing these disparities to improve healthcare delivery.

### 1.6 Previous Studies

To begin with, a fact worth mentioning on the subject of EMP within the Algerian context is that the research literature is significantly limited. After highlighting the latter, it is important to denote the already covered points within the existing literature. From the number of studies on the subject of EMP and its importance for medical students and professionals in the Algeria, studies explored the importance of teaching EMP to medical doctors through descriptive surveys. The conducted needs analysis corroborated the fact that including an EMP course within the official curriculum would bring ample benefits in both academic and career- long run (Ould Si Bouziane, 2020; Romane&Bahloul, 2022). Such course, would enable the medical students and practitioners to engage effectively in the English-dependent and discourse-specific research and conferences. In pedagogical practice, Laggoun, and Benmoussat (2023) investigated the code-switching between two foreign languages in EMP courses as a pedagogical strategy and its impact on medical terminology and vocabulary comprehension. The results demonstrated a positive impact on context-dependent vocabulary comprehension and retention. Previous Turkish study by Mustafa Naci KAYAOĞLU and Raşide DAĞ AKBAŞ (2016) have highlighted that from the four language skills, participants primarily focused on speaking, moving to listening, reading and writing. This investigation illustrated the heavy emphasis on communication skills while all the language skills are important in the learning process and should be integrated into the syllabus. (p. 69). Another study suggests that listening implemented as the most important skill (Chia, 1999)

With regard to the possible challenges that the teaching and learning of EMP might pose, studies have determined that challenges could be institution-related, teacher-related or learner-related (Talha& Benhattab, 2022; Boumaza, 2023; Djaileb, 2018). The observed challenges are

## Chapter One: Literature Review of English Language Barriers for Algerian Doctors

highlighted as similar to other contexts and not specific to the Algerian context. The first is a set that includes aims of unrealistic nature, time restrictions, syllabus design challenges, limited teaching materials, basic proficiency evaluation, low attendance, and large classroom size. The second includes heterogeneity of learners, lack of motivation, poor General English of learner`s lack of field-specific knowledge, and focus on test results instead of skill and knowledge development. The third involves inexperience with the medical subject genre, psychological issues unfamiliarity, testing methods or material development unfamiliarity, and deficient coordination.

In addition to the identified challenges several solutions have been suggested following the same typology of the challenges. As such, the solutions related to the first type incorporate stressing the cruciality of a thorough needs analysis for course design, precise determination of teaching goals and targeted linguistic skill, provision of teaching manuals, as well as careful selection of teachers with sufficient general language and content knowledge. With relevance to the second type, solutions involved attending workshops, conferences and in-service training on teaching methods, techniques, material development and adaptation, and evaluation. The third type`s solutions encompass seeking homogeneity in proficiency levels within one class, developing general English proficiency coupled with providing individual time to address individual weaknesses, raise learning motivation by highlighting the usefulness and relevance of projected learning outcomes. One notable point on solutions, is that actual implementation can vary in difficulty from one solution to the other. Another point to be mentioned is that both challenges and solutions, ESP and EMP Solutions are generally related.

### **1.7 Conclusion**

In summary of the above detailed, the importance of learning a foreign language, particularly English, cannot be overstated in expanding professional opportunities across various fields, including medicine where high proficiency in English are required to engage in English-reliant events, such as medical conferences. In the conference context, Algerian doctors face challenges primarily attributed to their French educational background. The chapter has critically examined the status of both French and English languages in Algeria as well as their impact on both medical education and practice. In so doing, it has also examined English for Specific Purposes, particularly English for Medical Purposes, highlighting the challenges doctors face in acquiring medical English and the language barriers in professional settings. Reviewing relevant studies, this chapter has shed light on the critical need for enhanced English language skills among Algerian medical professionals to participate in global medical discourse effectively.

**Chapter Two:**

**Methodology & Data**

**Collection Procedures**

## **2.1 Introduction**

This chapter outlines a detailed description of the methodology and data collection procedures on which the research is based, it addresses the difficulties and linguistic challenges faced by the Algerian doctors educated in French, when participating in English-language medical conferences and trying to follow the up-to-date medical research. Thus, the chapter explores different angles. Primarily, it covers the purpose and objectives this study seeks to achieve, and focuses on research approaches, setting, participants, instruments and data analysis procedures used to conduct the investigation. Conclusively, the chapter addresses Validity, Reliability and the ethical considerations that guarantee the credibility of the research findings.

## **2.2 Research Objectives and Motivations**

The primary aim of this study is to explore the status of English language proficiency among Algerian doctors and its influence on their engagement when attending English-language medical conferences, as well as shed light on the main challenges and language barriers faced by these doctors. To achieve this, this research will try to assess/gauge the English language level of the Algerian doctors and identify the significant challenges these doctors face in international medical discourse especially in English-language settings.

Furthermore, the study examines the strategies those healthcare professionals used to bridge language gaps. Then, offer possible strategies and recommendations to improve the English language competence and reduce the language barriers.

## **2.3 Research Design**

"A research design is a plan or proposal to conduct research, involves the intersection of philosophy, strategies of inquiry, and specific methods. It is not just a work plan but a plan that includes the theoretical paradigms, the strategies that are used to gather and analyse data, and the methods that provide specific direction for procedures". (Creswell J. W., 2003). This strategy outlines the theories and models that form the framework of the study, and it establishes the methodology and the techniques to be used for achieving the objectives and gaining credible findings, According to (Salkind, 2002) Research design refers to an organized structure that reviews how exploration will be conducted to produce reliable results.

## **2.4 Research Approaches**

Investigators use methodical procedures and systematic processes to gather, explore and interpret data from the world of experience in order to plug in knowledge gaps, and this is generally identified as research. As (Creswell J. W., 2012) defines research as "a series of steps used to collect and analyze data in order to improve our understanding of a topic or situation"(p. 3). This means that research is the planned method of acquiring and examining data to gain a better understanding or solve an issue, it includes making plans, gathering knowledge, examining the results and reaching satisfying conclusions, all these factors lead to a broaden insight or make informed decisions.

In any research, there are three main approaches used by researchers: quantitative, qualitative and mixed methods. These approaches are selected based on the research questions and the study settings to examine and interpret the results effectively.

### **2.4.1 Quantitative approach**

Quantitative approach is a procedure of gathering and analysing numerical data, which will be subjected to deeper interpretation implementing various statistical analyses. In this context, researchers use methods of investigation including survey-based studies, experimental designs and collect data by using instruments that produce statistical data (Creswell J. W., 2003). Meaning that to obtain reliable findings, research practitioners use those systematic methods, such that surveys offer high-level perspectives while experiments examine causal effects. Yilmaz(2013) stated that «the data collected are analyzed descriptively in tabulation form".

### **2.4.2 Qualitative Approach**

When attempting to analyze and evaluate non-numerical (descriptive) data, researchers commonly adopt qualitative approach, for the purpose to understand the realities of individual's social life, especially their behaviour, ideologies and motives. For this method to succeed and achieve the desired outcomes, this type of study generally requires interviews, note-taking, focus groups and contextual observations. By using this type of research gives you the ability of understanding topics that are unfamiliar or not well understandable, those qualitative procedures allow researchers to reach their goals of determining new concepts and theories.

### **2.4.3 Mixed Methods Approach**

While blending both quantitative and qualitative approaches a new method created as a consequence generally known as the mixed methods approach, this one combines components of both to offer a broader insight and a comprehensive coverage to the research problem. Since both methodology's purpose is to gain a profound comprehension of the present-day world, they may be successfully combined. As they share the same aim, their integration offers various critical viewpoints that foster better comprehension of situations and enhance human well-being.

Furthermore, each approach allows researchers to gain a greater validity of the outcomes and more profound comprehension of the study topic when using their unique instruments. (Lohfeld, 2002.).

In this study, the researchers opted for mixed method, combining both quantitative and qualitative methods, offsetting limitations of exclusive quantitative or exclusive qualitative approach by maximizing the strengths of each data method, and giving deeper understanding of the topic of the study.

### **2.5 Scope of the Investigation (Research Site)**

The setting of the study encompasses the physical, social, experimental environment where the study takes place, covering different aspects such as location, time frame, target population, and surrounding conditions.

For this study, this research is conducted in Algeria and was carried over a period of several months in 2025. It is focused on Algerian medical professionals practicing in various public and private healthcare institutions across the country. This research is conducted in a context where there is a disconnect between the increasingly English-dominated medical landscape and the Algerian medical education that is relying solely on French.

### **2.6 Participant Sample**

Research studies are performed using a sample of participant instead of the whole population, making this selection important phase in the research design, as this decision affect the Validity of the research findings and data collection. It functions as a sub-unit which symbolizes the larger population, which is associated primarily with the database gathering and analysis process. Polit (2001) described sampling as the technique of choosing a certain people

group, events, mindsets, or other units to employ in a specific study. Which means that the technique of choosing the proper sampling is important to give valuable and meaningful answers to the investigators research questions?

Another essential element to take into consideration is the size of the sample population, since broader samples commonly provide more credible and reliable outcomes compared to small samples, due to the fact that it lowers the degree of errors and increases the accuracy of the population.

In this research random sampling was chosen as it the ideal and the simplest data collection method, ensuring unbiased research, and helps in drawing conclusions easily and effectively.

### **2.6.1 Doctor`s Profile**

The participants in this study are doctors who completed their medical studies and are practicing medicine, hailing from various cities in Algeria, they completed their studies in different universities across the country, namely the Oran Faculty of Medicine, Algiers Faculty of Medicine, Annaba Faculty of Medicine. As established before, all the participants share a common educational background having done their medical education completely exclusively in French. The group includes male and female doctors, representing general practitioners and specialists in various fields. Their professional experience ranges from newly graduated doctors to seasoned doctors with more than 20 years of medical practice.

## **2.7 Data Collection Instruments**

Data collection or data gathering is basically most important section of the whole research study. The procedure of collecting and reviewing data from different sources with the aim of creating a complete overview for the area of investigation is known as data collecting, it helps investigators to evaluate identifiable structures, analyze hypotheses and formulate better conclusions validated by reliable data.

The selection of a data gathering instruments relies on several significant aspects, such as study objectives, the sample population, the data needed. It is also impact by accessible materials including the setting and time of the study, and the necessity of Reliability and ethical considerations. The appropriate choice of the method needed improves the Validity of the study and confirms ethical data obtaining. These instruments are classified into qualitative, quantitative and mixed methods data collection tools.

To identify the challenges the Algerian doctors educated in French faced while attending English-Language Conferences and Medical Research, two data collection instruments were used to collect data from various perspectives: an online questionnaire and three (03) interviews. Each one of the two instruments provides a different objective for this study.

### 2.7.1 Questionnaire

A questionnaire is a quantitative research instrument; it is composed of a set of questions or other prompts with the aim of gathering information from diverse sectors of society or a particular entity. Surveys or questionnaires are highly recommended for their capacity to collect a larger amount of reliable data from credible sources that lead to accurate analysis and evaluation. This instrument generally includes different types of questions, each providing a precise purpose in the process of collecting data; these questions are classified into two primary types: **close-ended questions** and **open-ended questions**.

Close-ended questions are used to collect responses within a specific range of options and are effective for quantitative data. They include:

**Multiple-choice Questions:** are one of the most popular and successful survey types for collecting quick data and feedback, the respondents must select one or multiple response from predefined answers.

**Yes/No Questions:** are also called closed questions since there is only two options allowed, so the respondent must choose between `Yes` or `No`.

**Wh- Questions:** begin with why, where, when, etc., respondents must provide a detailed answer instead of yes or no.

In contrast, open-ended Questions are used to collect more detailed and customized responses, providing the participants the ability to talk freely using their own words to express their points of view.

To successfully gather doctor's insights, the researchers applied this data collection tool, employing all previously mentioned guidelines regarding the questionnaire design, lexical selection and the proper order of questions. The objectives of this tool are to obtain

participants' language proficiency levels and covered the challenges they face. It is an exact technique, which allows the researchers to reach a large number of participants in a short period of time providing valuable, valid and reliable data. A total of sixty (60) doctors from different specialties, including both specialists and general practitioners answered to this survey.

The participants were requested to answer the questionnaire in French to avoid any possible difficulties, the questionnaire questions were written in English and then translated into French to match with doctor`s language proficiency. The survey is arranged into fourteen (14) questions, twelve (12) of them are direct questions that require a precise answer to select, while the two (2) last questions are open-ended, where the participants express themselves freely.

- Question 01 helps the investigators understand how gender impacts the challenges associated with English language barriers.
- Question 02 and 03 aim to review the doctor`s career experience and their self-assessed English proficiency level to grasp how they face those barriers in attending English conferences and medical research.
- A question 04 helps to understand whether those language barriers effect Doctor`s attendance in English-language medical conferences or not.
- Questions 05 clarify how far these English language difficulties influence their access to the latest medical progress.
- Question 06 provides insights into how Algerian doctors have obtained their language skills and its influence on their proficiency in using English in medical settings.
- Question 07 seeks to uncover which aspects to concentrate on to advance their English level.

- Question 08 sheds light on which difficulty they face, if it's related to communication abilities, grammar or other difficulties.
- Question 09 and 10 aim to identify the aspects that restrict access to up-to-date medical research, and how it hinders doctor`s willingness to actively participate in academic settings.
- Question 11 and 12 serves to clarify the functional solutions to improve their English skills and its importance in the medical field.
- The objective of question 13 was to assess doctors personal and professional goals related to language competency and to address their specific needs.
- Question 14 helps to gather doctor`s perspectives on potential solutions in order to inform improvements in the academic environment.

### **2.7.2 Interview**

An interview is an important method of data collection. Researchers used this qualitative instrument to collect information for their study. It generally refers to a conversation between the interviewer and the interviewee; it can be conducted face-to-face, via phone or virtual platforms. There are three main types of interviews: structured, semi-structured and unstructured. A structured interview follows a precise list of questions, maintaining standardized responses among all participants. A semi-structured interview provides some freedom and adaptability where the questions are adjusted based on the responses, with a predefined set of questions. On the other hand, the unstructured interview encourages open-ended conversations without any prepared questions.

In this study the researcher used a semi-structured interview allowing for flexibility in responses, and provided the interviewees the freedom to express themselves and share their personal experiences with English language in the professional setting.

The semi-structured interview questions were designed to make the participants as comfortable as possible to get insights from them without being pressured or guided towards specific answers.

***Interview Opening:*** first the researcher creates an atmosphere to make the interviewees comfortable, gain their trust. The questions 1 and 2 of the interview aim to ease the participants into the topic and establish context, by understanding the participants' professional experience and their exposure to English in their daily practice.

***Interview Body:*** in body, the questions were designed to explore in-depth the participants' lived experiences with the English language in their professional setting. These questions aim to identify the challenges these doctors encounter when participating in international conferences, engaging with English medical resources. Additionally, these questions explore the coping mechanisms and strategies these doctors employ to overcome these barriers. Finally, the participants were asked to give their suggestions on how to improve the proficiency level and reduce the barriers for the practicing doctors.

*Interview Closing:* at the end of the interview, the researcher expressed gratitude towards the participants for their time, patience, and cooperation. The researcher then closed the interview and thanked the interviewees for the valuable data that greatly helped in fulfilling the aim of this research.

## **2.8. Data Analysis Procedures**

To make this study successful, many procedures were taken into consideration in the process of analysing data. In the first step, the researchers collected data from different sources, such as a questionnaire and three interviews. The researchers created an online questionnaire to gather the data needed, this instrument is important to review doctor`s English level proficiency then identifying solutions and improvements. The researchers conducted three (03) interviews: two of them were performed face-to-face, while the third one was conducted online, these instruments allowed the researchers to deeply understand the different struggles and obstacles faced by the doctors.

Once the data gathered, the researcher analysed the data given so they could identify areas of weakness and the difficulties encountered by the Algerian Doctors educated in French in English medical conferences, and to propose the essential improvements to bridge this gap.

## **2.9 Ethical Consideration**

Validity and Reliability are two essential models that are usually seen together to confirm the credibility and quality of the study efficiency. Validity is the main element in research design, its aim is to ensure that the outcomes realistically refer to the study under investigation, so it precisely measures what is meant to assess.

To confirm the Validity, the researchers have presented the data collection and analysis processes. Furthermore, the participants were selected in order to enhance the credibility of the findings. These participants have different traits such as gender, experience level and English proficiency, but they all share one common point which is they are all doctors who completed their studies exclusively in French.

On the other hand, Reliability refers to the evaluation of the consistency and stability of a measurement across time, it shows how well the findings can be reproduced with the same conditions, this technique ensure that the outcomes are repeatable but free from any errors. A high Reliability means stability across time. However, it is not easy to establish whether the measurement is accurate without Validity.

To increase the Reliability of this study, the researchers guaranteed that all data collection instruments aligned with a shared objective. The questionnaire was performed to determine the level of doctors in English and further related factors. The interview was used to gather broader knowledge about the doctor`s experiences in English professional settings and to suggest some improvements in their academic environment.

In this study the researcher focused to ensure and guarantee the Validity and Reliability of the work, the researchers used a mix of questionnaire and three (03) interviews, which allowed the researcher to easily engage and connect with doctors, gathering data from their experiences and points of view. Following the ethical considerations, the researcher ensured the anonymity of participant`s identities as they had the right to skip or refuse any question they did not wanted to answer. Informants were notified that their responses had been recorded, observed and will be used only for the purpose of this research.

## **2.10 Conclusion**

Drawing everything together, this chapter emphasized each methodological tool the researchers integrated in this study. It adopted study objectives, research design, research approaches, settings, participant sample and the data analysis procedures. This part focused on data collection by employing mixed instruments which are the questionnaire and the interviews. The investigators provided a clear overview of Validity, Reliability and ethical considerations of this work. This chapter leads to the next chapter which will be focused on data analysis, findings, interpretation and recommendations.

# **Chapter Three: Data Analysis, Suggestions and Recommendations**

## Chapter Three: Data Analysis, Suggestions and Recommendations

### **3.1 Introduction**

This final chapter is structured into three main sections, namely, data analysis, interpretation of findings, and recommendations. It begins with an analysis of the data collected through both quantitative and qualitative methods. Quantitative data from the questionnaire will be presented using visual tools such as pie charts, graphs, and tables to illustrate key trends and patterns. Complementing this, qualitative data from the interviews will be analysed through selected quotes, offering more profound insight into participants' personal experiences. The primary objective of this chapter is to synthesise the numerical data with the narrative responses in order to gain a fuller understanding of the English language barriers faced by professionals. Through integrating these two sources of data, the chapter highlights both the measurable and experiential dimensions of the challenges encountered. The chapter concludes with a set of practical recommendations, drawn directly from the findings, which aim to inform future strategies, interventions, and policies to help mitigate these language-related obstacles in professional settings.

### **3.2 Data Description**

This part aims to present and explain the important aspects of the data gathered. This step is essential in grasping the entire form of the data collected from the participants before moving to the interpretation.

## Chapter Three: Data Analysis, Suggestions and Recommendations

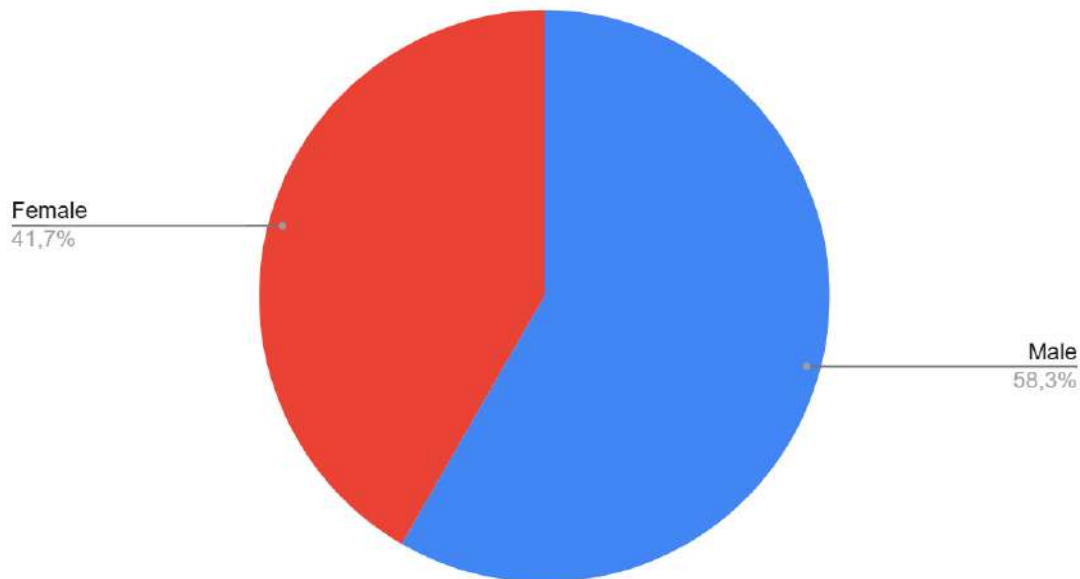
### **3.2.1 Data Description of the Questionnaire**

This section presents the analysis of the quantitative data collected through the questionnaire. The questionnaire was designed to explore participants' perceptions and experiences regarding English language use in professional contexts. The responses have been organised and analysed using descriptive statistics, with the findings illustrated through pie charts, graphs, and tables. This visual representation aims to highlight key patterns, trends, and areas of concern related to language barriers. The analysis serves as a foundation for understanding the broader challenges professionals face and sets the stage for a deeper interpretation in the subsequent section.

#### ***Question One***

The first question focuses on collecting demographic information, specifically the participants' gender. Understanding gender distribution allows for exploring potential differences in how male and female doctors perceive and experience English language barriers in their professional settings.

What is your gender?



**Figure 3 1 Gender Distribution**

As shown in Figure 3.1, the gender distribution of the participants reveals that 58.3% are male and 41.7% are female, indicating a slightly higher participation rate among male doctors. While this demographic detail provides valuable context, it is important to note that the study does not explicitly focus on gender as a variable of analysis.

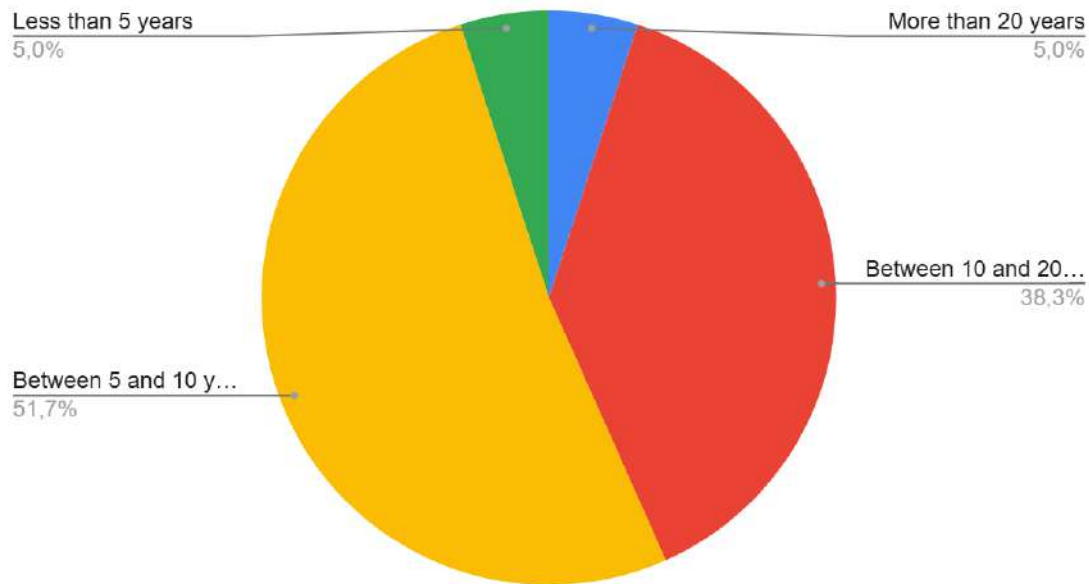
### ***Question Two***

This question is designed to assess the participant`s level of professional experience. Understanding the range of experience allows for the exploration of potential differences in how

## Chapter Three: Data Analysis, Suggestions and Recommendations

less experienced (early-career doctors) and more experienced (senior professionals) doctors perceive and encounter English language barriers in their professional practice.

What is your level of professional experience as a doctor?

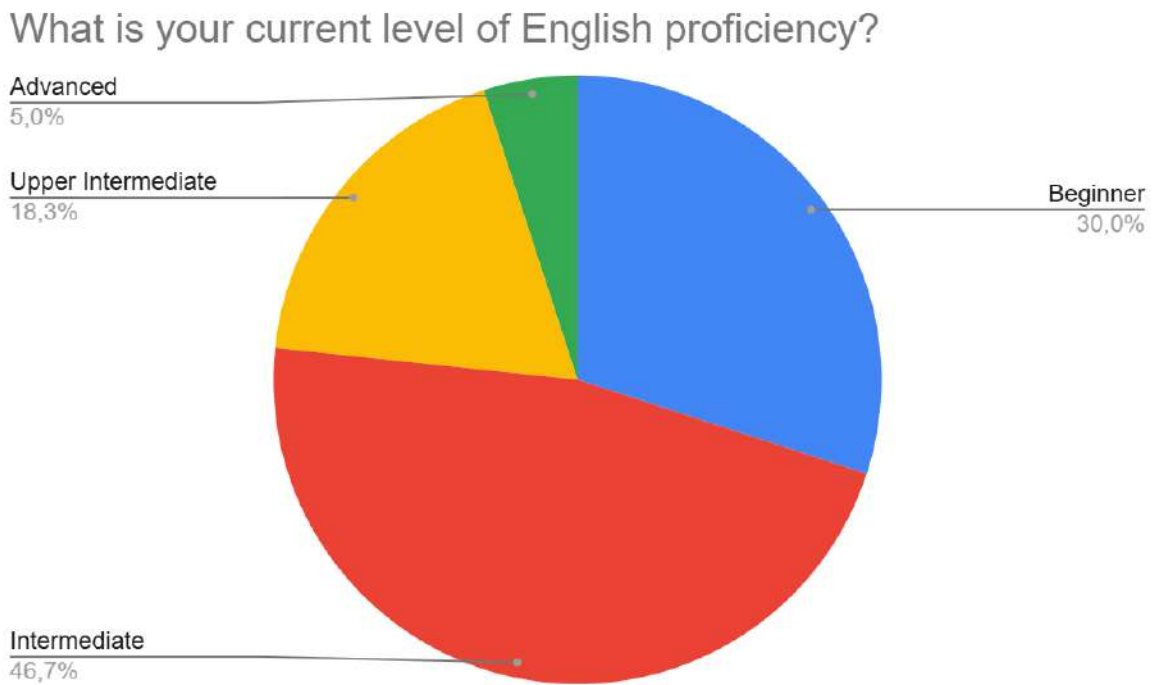


**Figure 3 2 Professional Experience**

The figure above illustrates that the most of participants (51.7%) have between 5 and 10 years of medical practice. This is followed by 38.3% of doctors who have between 10 and 20 years of professional experience. In contrast, those with less than 5 years and those with over 20 years of experience each represent only 5% of the sample, indicating a lower representation of both early-career and highly experienced doctors in this study.

*Question Three*

This question aimed to gather participants' self-assessed English proficiency levels. Understanding their perceived language competence provides insight into how proficiency may influence their ability to engage in professional activities such as medical conferences and research conducted in English.



**Figure 3 3 Participants` English language self-assessment**

## Chapter Three: Data Analysis, Suggestions and Recommendations

As shown in Figure 3.3, the most significant portion of participants (46.7%) rated their English proficiency as intermediate, suggesting they may encounter some difficulties when accessing medical literature or participating in conferences conducted in English. Additionally, 30% identified as beginners, indicating more significant language challenges. In contrast, 18.3% rated themselves as upper-intermediate, reflecting a stronger command of the language. Only 5% of participants reported an advanced level of proficiency, highlighting that a small minority feel fully confident using English in professional contexts.

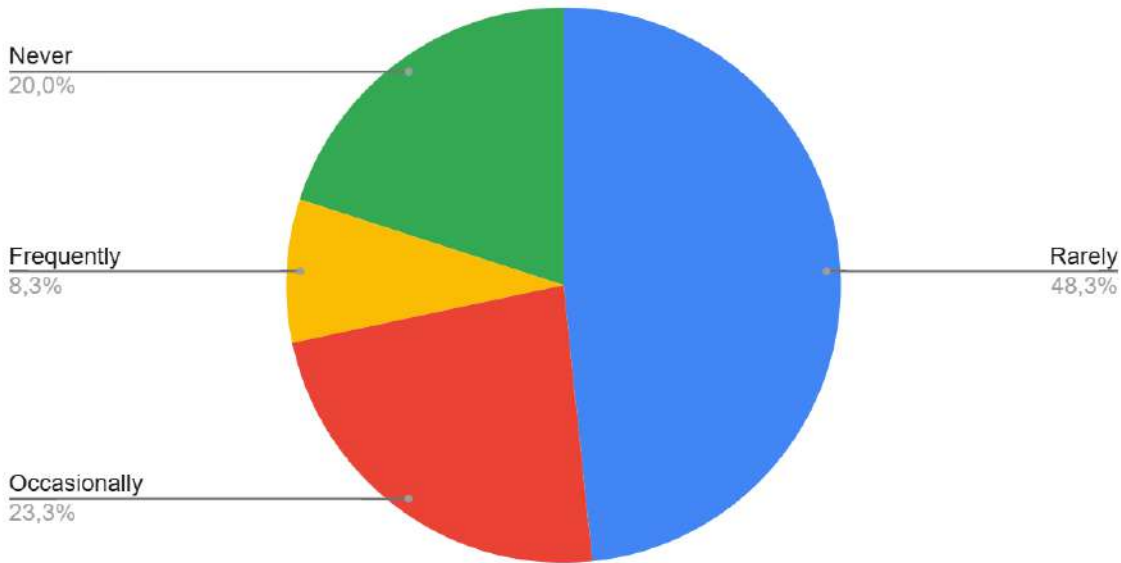
### *Question Four*

This question explored how often participants attend medical conferences conducted in English. Gaining insight into their level of exposure to such events helps assess whether

## Chapter Three: Data Analysis, Suggestions and Recommendations

language proficiency acts as a barrier to their active participation.

How often do you attend medical conferences conducted in English?



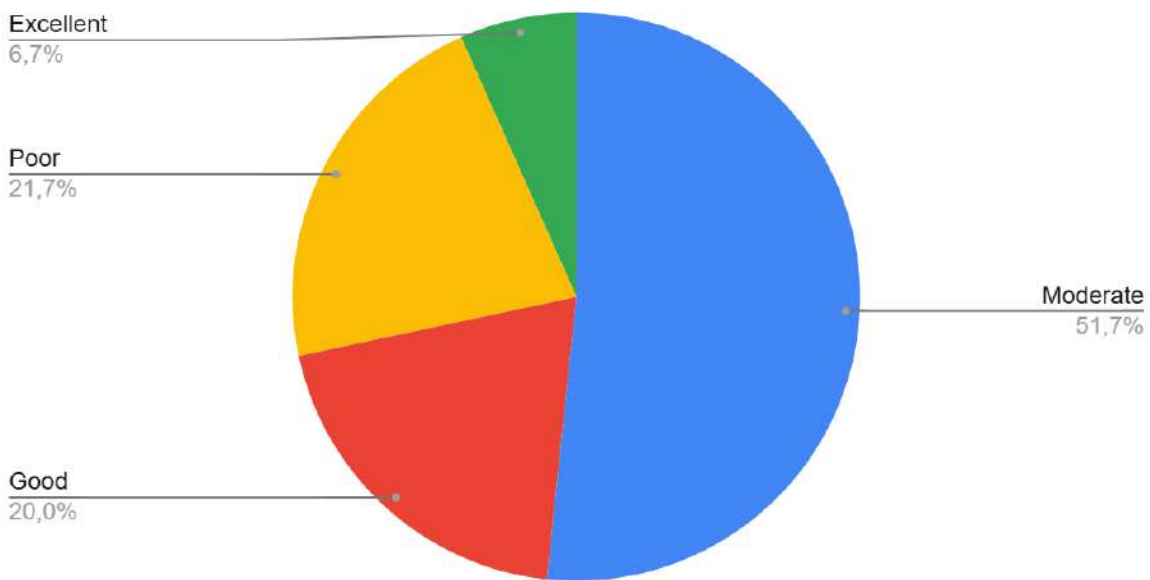
**Figure 3 4 Involvement in the English language medical conferences**

The figure above reveals that a considerable number of participants face challenges in attending English-language medical conferences. Specifically, 20% indicated they have never attended such events, and 48.3% reported attending them rarely. Meanwhile, 23.3% stated they attend occasionally, and only 8.3% participate frequently. These findings suggest limited engagement with English-medium professional events among the majority of respondents.

**Question Five**

This question is intended to assess doctors' ability to read and understand medical articles and journals written in English. The responses help determine the extent to which language barriers may limit their access to the latest medical research and advancements.

How do you rate your ability to research and understand up-to-date medical data published in English?



**Figure 3 5 Medical research skills in English language**

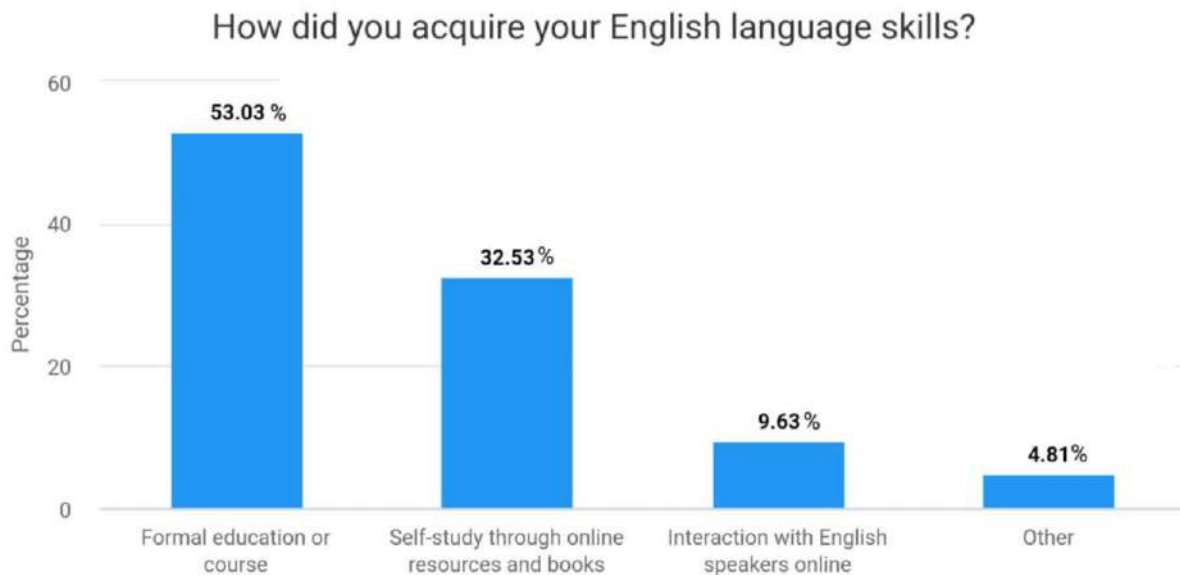
The figure above indicates that the majority of participants (51.7%) rated their ability to research and comprehend up-to-date medical information in English as moderate. This suggests that while they are able to engage with English-language medical content to some extent, they still encounter noticeable difficulties. Furthermore, 21.7% reported having poor ability in this

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area, while 20% considered their skills to be good. Only 6.7% rated their ability as excellent, highlighting that few participants feel fully confident in navigating English medical literature.

### *Question Six*

This question seeks to understand how Algerian doctors have acquired their English language skills. Identifying whether their learning was through formal education, informal exposure, or self-study helps provide insight into how their mode of learning influences their proficiency and confidence in using English for medical purposes.



**Figure 3 6 Participant's English language background**

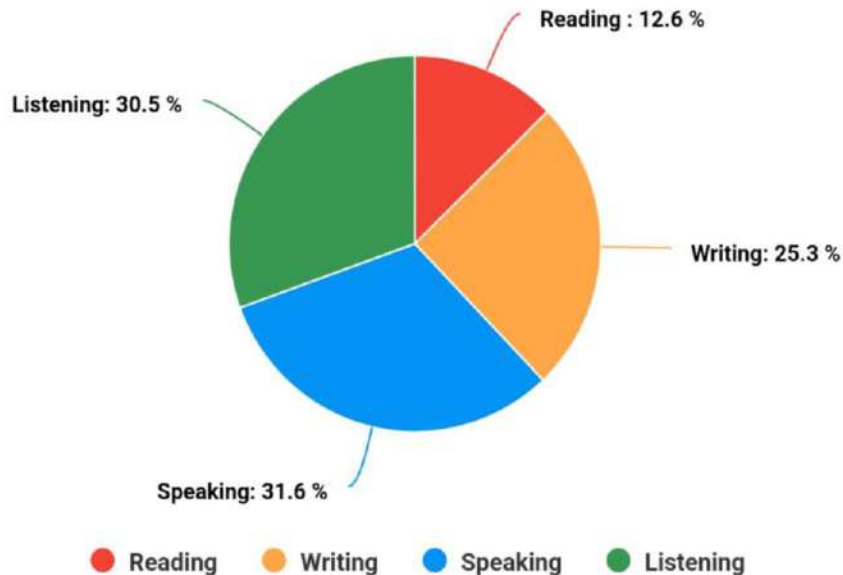
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The figure above illustrates that the majority of participants (53.03%) acquired their English language skills through formal education. Additionally, 32.53% reported learning English independently through online resources and books. A smaller group (9.63%) developed their skills through online interaction with English speakers. The remaining 4.81% indicated other learning methods, such as watching English-language TV programs, movies, and series.

### *Question Seven*

This question aims to determine which specific aspects of English language skills Algerian doctors find most challenging. The identification of these areas is crucial for understanding where targeted support and improvement efforts should be directed.

Which aspect of English language skills is most challenging for you?



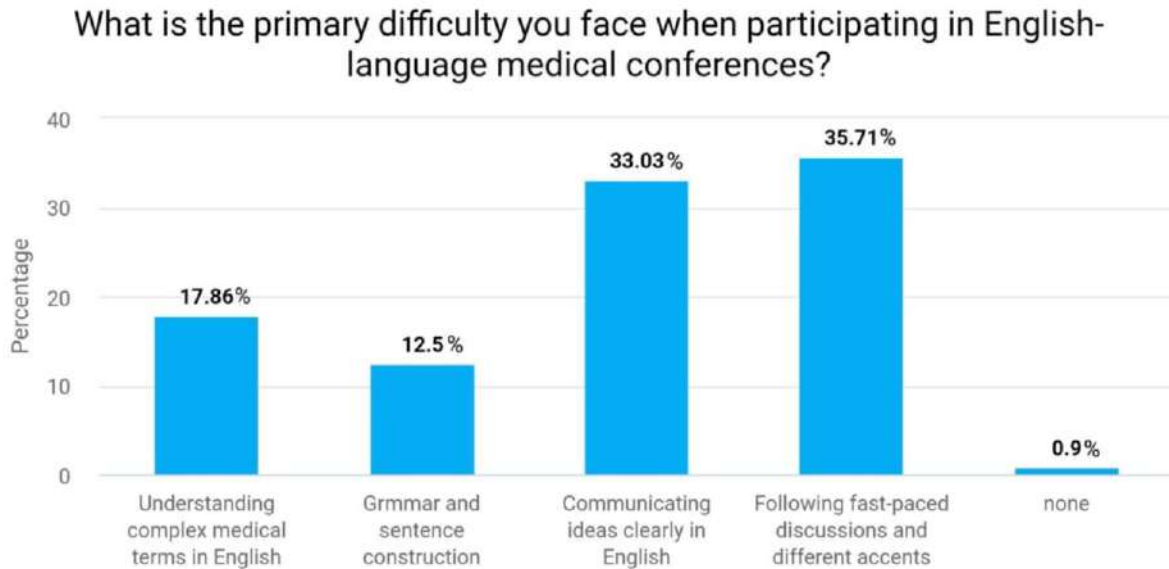
**Figure 3 7 Participant's main challenges in English language**

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This question allowed multiple responses, enabling participants to select more than one aspect of English they find challenging. The results indicate that speaking (31.6%) and listening (30.5%) were the most frequently reported difficulties. Writing also emerged as a significant challenge, cited by 25.3% of respondents, while reading was the least reported issue, mentioned by only 12.6%.

### *Question Eight*

This question seeks to identify the primary challenges Algerian doctors face when participating in medical conferences conducted in English. It helps determine whether their difficulties stem from comprehension, clearly expressing their ideas, or other related issues.



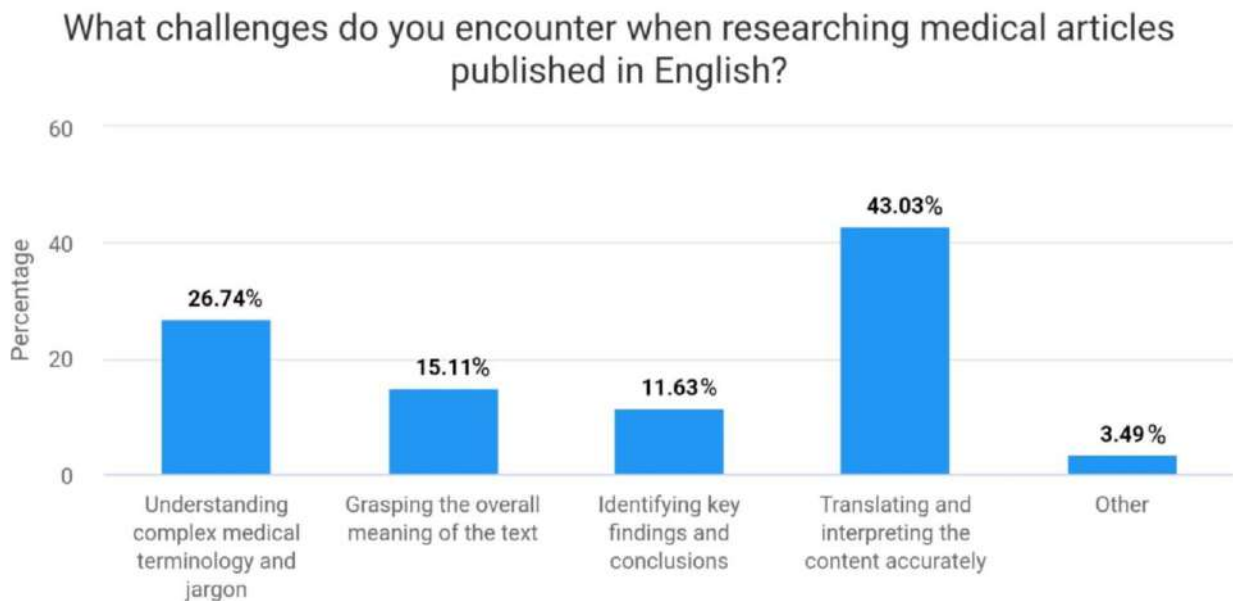
**Figure 3 8 Participant's main challenges in English medical conferences**

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Chart 3.8 indicates that the most commonly reported challenge among doctors is “*following fast-paced discussions and different accents*” selected by 35.71% of participants. This is closely followed by 33.03% who cited difficulty in “*communicating ideas clearly in English*”. Additionally, 17.86% of respondents pointed to “*understanding complex medical terms*” as a challenge, while 12.5% reported struggling with grammar and sentence construction. Only a small minority (0.9%) indicated that they experience no difficulty at all.

### ***Question Nine***

This question aims to investigate the specific difficulties Algerian doctors encounter when researching medical advancements and journals written in English. Understanding these challenges will help identify the key factors that hinder their access to current medical knowledge.



**Figure 3 9 Main challenges in translating English medical journals and articles**

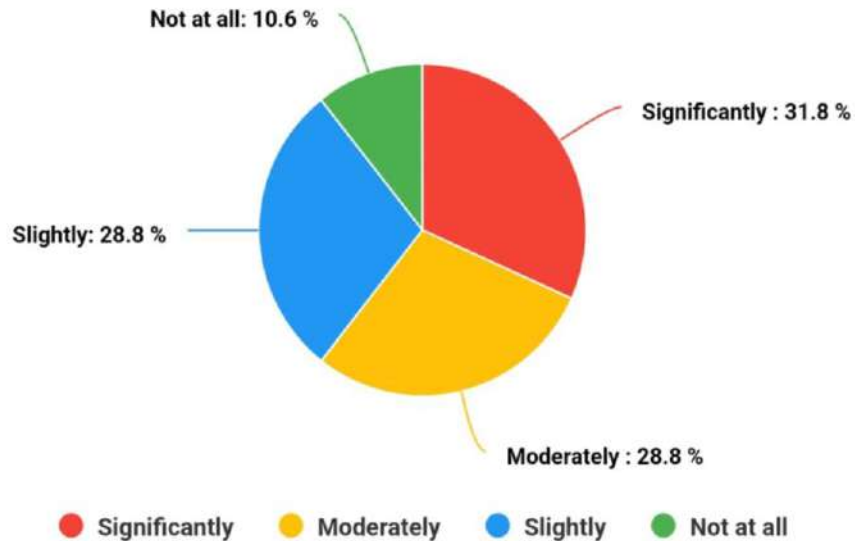
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Chart 3.9 reveals that the most commonly reported challenge is accurately translating and interpreting content, cited by 43.03% of participants. This is followed by difficulty in understanding complex medical terminology and jargon (26.74%). Grasping the overall meaning of texts was reported by 15.11%, while 11.63% of participants indicated challenges in identifying key findings and conclusions. A small percentage (3.94%) mentioned other difficulties, such as a lack of resources.

### *Question Ten*

This question seeks to assess how language barriers affect Algerian doctors' self-confidence when presenting at English-speaking medical conferences. The responses provide insight into how these barriers may limit their willingness to actively engage in academic and professional settings.

How do language barriers affect your confidence in presenting at English speaking medical conferences?

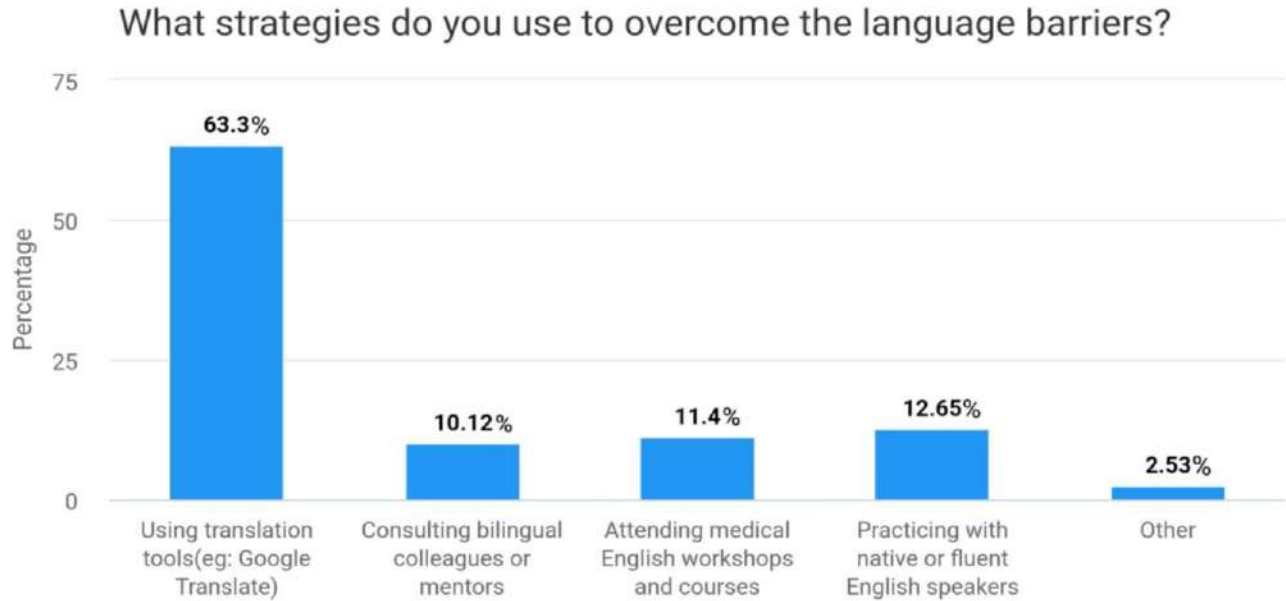


**Figure 3 10 Impact of language barriers on participants' confidence in medical conferences.**

Pie Chart 3.10 shows that the largest proportion of participants (31.8%) reported that language barriers have a significant impact on their confidence. This is followed by 28.8% who stated they are moderately affected, and another 28.8% who indicated they are slightly affected. Only 10.6% of respondents said that language barriers do not affect their confidence at all.

### ***Question Eleven***

This question explores the strategies commonly used by Algerian doctors to overcome language barriers. It aims to shed light on the practical solutions doctors rely on to improve their English proficiency.



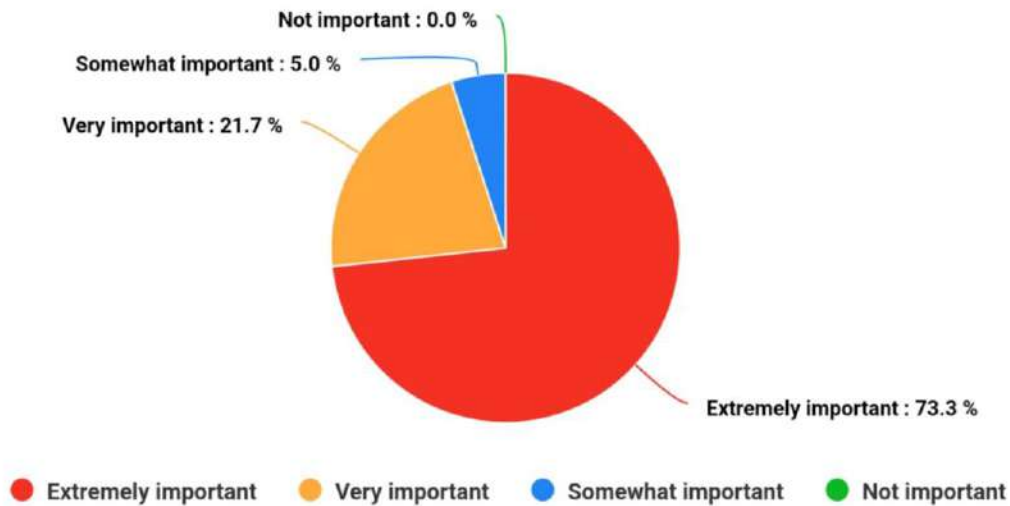
**Figure 3 11 Strategies to overcome English language barriers**

The chart above indicates that the majority of participants (63.3%) rely on translation tools to overcome language barriers. Meanwhile, 12.65% reported practicing with native or fluent English speakers, and 11.4% mentioned attending medical English workshops or courses. Consulting bilingual colleagues or mentors was selected by 10.12% of respondents. A small percentage (2.53%) shared other strategies, such as reducing the use of the French language.

### ***Question Twelve***

This question aims to gauge the participants' opinion on the importance of improving English proficiency level in the context of global medical collaboration.

How important is it for Algerian doctors to improve their English proficiency level for global medical collaboration?



**Figure 3 12 Perspectives on the importance of English language in medical research**

The results presented in the pie chart show that the overwhelming majority of respondents consider improving English proficiency essential for global medical collaboration. Specifically, 73.3% rated it as "extremely important" while 21.7% selected "very important". Only 5% considered it as "somewhat important", and none of the participants considered it "not important".

### ***Question Thirteen***

In response to the open-ended question, "Why do you think improving English proficiency is important for Algerian doctors?", participants were invited to share their personal views on the matter. Their responses were generally specific and focused, highlighting three key themes, which are presented in the table below.

**Table 3 1 Insights on ways to improve English language skills in medical domain**

<b>Themes</b>	<b>%</b>	<b>Students' perspectives</b>
<b>Access to medical knowledge and updates</b>	51.6%	The majority of the participants emphasized the need for English to access the latest research, medical publications, and clinical updates. <i>Ex: "Currently, it is the main language for transmitting knowledge. New medical publications are in English."</i>
<b>English as the global/scientific language</b>	35%	Participants emphasized that English is the dominant language in medicine and science globally, making its mastery essential. <i>Ex: "Mastering the language facilitates participation in international congresses, training sessions, and conferences with colleagues from around the world."</i>
<b>Professional opportunities and career development</b>	6.7%	Participants pointed to improved job prospects, study opportunities abroad, and career growth through English proficiency. <i>Ex: "Mastering English can increase graduates' chances of accessing job opportunities or receiving training abroad to maintain their professional development."</i>
<b>Miscellaneous</b>	6.7%	Containing responses that did not fit the aforementioned themes, including comments on the decline of the French language, or improving healthcare quality. <i>Ex: "To move away from Francophone dependency and engage with the best doctors in the world, who are Anglo-Saxon."</i>

### ***Question Fourteen***

In response to the question, “*What do you think Algerian Medical Faculties should do to overcome these language barriers?*”, participants were asked to share their suggestions on strategies that could be implemented by medical faculties to enhance English proficiency among Algerian medical students and doctors. This question explores the perceived responsibilities of

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medical institutions in addressing the language challenges faced by healthcare professionals in Algeria.

**Table 3 2 Proposed strategies for medical faculties to overcome the language barriers**

Themes	%	Students' Perspective
<b>Introducing or Reinforcing English in the Medical Curriculum</b>	71.76 %	The vast majority of the participants wants English to be integrated in medical curriculum, through modules, courses in Medical English. <b>EX:</b> <i>“Introduce a medical English module for a start, with the aim to eventually teach medical studies in English.”</i>
<b>Replacing French with English as the Language of Instruction</b>	18.33 %	Other participants take it a step further advocating for the complete language shift to English replacing French. <b>EX:</b> <i>“Study medicine in English and eliminate the use of French.”</i>
<b>Improve English Language Education in General (Pre-university)</b>	6.67%	Some respondents highlighted the need for early education reforms to make the transition to university smoother. <b>EX:</b> <i>“It has to start earlier — in primary and middle school — to make things easier later.”</i>
<b>Miscellaneous</b>	3.33%	a small portion gave unclear responses. <b>EX:</b> <i>“I don't know”</i>

### 3.2.2 Data Description of the Interviews

As part of this research, semi-structured interviews were conducted with three (03) Algerian doctors. Due to language barriers, only one participant was able to complete the interview entirely in English, at the same time the remaining two were conducted in French to facilitate the data collection process and ensure the participants could express themselves freely.

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The semi-structured format allowed for flexibility in responses and provided the interviewees with the opportunity to share their personal and academic experiences with English language difficulties, as well as the strategies they employ to cope with these challenges. The findings are presented using direct quotes from the interview data. For the two interviews conducted in French the answers were translated to English and presented as quotes. For ethical considerations and to protect participant anonymity, the interviewees are referred to as *Informant 1*, *Informant 2*, and *Informant 3*.

### ***Question One: professional experience***

The first interview question, “*How long have you been practicing medicine?*”, was designed to assess the professional experience of the interviewees. Understanding their length of practice helps to determine whether professional seniority influences the way doctors perceive and cope with English language barriers in medical settings.

**Informant 1:** “*I have been practicing medicine since 2012, so it's 13 years now*”

**Informant 2:** “*I have been in the medical field for 20 years. I began my studies in 2005. This first led to a general medicine degree, then I continued with the pediatric specialty course. I obtained the specialized medical studies diploma in pediatrics in 2017. I currently practice in the public sector.*”

**Informant 3:** “*If we can say since my birth. If I dare to say, of course. It is a family heritage and I started my studies in medicine in 2006 and I started my specialty in 2014.*”

The main findings show that the three interviewees have accumulated over 10 years of experience in the medical field, indicating a high level of professional maturity. This shared seniority allows for a more informed perspective on long-term challenges with English in their

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professional careers. The responses suggest that despite extensive medical training and experience; language barriers remain a relevant issue even among seasoned practitioners.

### ***Question Two: use of English-Language resources in daily medical practice***

The question “*How often do you rely on English language resources in your daily medical practice? And is it necessary for you?*” was designed to explore how frequently Algerian doctors use English-language medical resources in their professional routines and whether they perceive such resources as essential for their practice. This helps identify the role English plays in accessing up-to-date medical knowledge.

**Informant 1:** “*Well, occasionally, since we use French most of the time, but sometimes we use English because there is a lot of resources in English language.*”

**Informant 2:** “*Yes, it is necessary, I use English resources routinely because scientific articles and medical studies in English are more abundant and more interesting than those in French. And it allows me to stay up to date on the latest scientific news in my specialty.*”

**Informant 3:** “*Of course it is necessary. Sincerely, I use it in a more or less average way due to the lack of English documentation in university libraries. In addition, our generation had the chance to access it through networks and especially the Internet.*”

The findings reveal that the three doctors agreed that English-language resources are necessary in the medical field. However, usage frequency varies due to contextual factors. Two informants (Informants 1 and 3 – **66%**) reported only occasional or moderate use, primarily because of the predominance of French in their work environment and limited English materials in libraries. In contrast, one informant (Informant 2 – **33%**) uses English resources routinely, citing their richness, accessibility, and critical role in keeping up with current medical research.

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This suggests that while English is universally recognized as important, actual usage is often mediated by environmental and institutional limitations.

### ***Question Three: experience with English-language medical conferences:***

The question *“Have you ever attended a medical conference conducted in English? Can you describe your experience?”* seeks to gather insights and firsthand personal experiences from the interviewees regarding their participation in medical conferences conducted in English.

**Informant 1:** *“Well, my experience, it was, in the beginning, it was not easy because we were not used to use English because we have done our studies in French, so it took a little bit of time to be used to it. In the beginning, we were using like Google Translation and sometimes the words we were using weren't correct. So, with time, we improved and it became more easy to use English language.”*

**Informant 2:** *“At first, I found it a bit difficult, but then you get used to it, because there are many scientific words that are similar to those in French.”*

**Informant 3:** *“I had the opportunity to attend a few English conferences during my modest career. I attended a few English webinars and it was very interesting and enriching.”*

From the data gathered it is observed that attending English-language medical conferences was not an easy task in the beginning as two of the interviewees declared that it was difficult in the beginning and it took time for them to get used to, because their entire medical formation was conducted exclusively in French so they had to adapt with the situation either by using translation tools or relying on the medical terms that are somewhat similar to those in French. Additionally, one participant deemed the experience “interesting and enriching”.

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### ***Question Four: challenges faced when consulting English journals and clinical studies***

The question “*When it comes to reading clinical studies or specialized English journals, what are the main difficulties you have encountered?*” aims to explore the specific linguistic challenges faced by these interviewees when researching clinical studies or journals published in English. This seeks to identify the barriers that may hinder their access to up-to-date medical knowledge.

**Informant 1:** “*Well, the difficulties we face, sometimes there is not a lot of books. For example, for the research in English, there is many resources, but in French, we don't have. So sometimes to understand some words, clinical words in English, it's not easy, but we have to do a lot of research to find the right terms to use for medical and clinical works.*”

**Informant 2:** “*Yes, I find difficulties because we don't practice English every day and we don't have enough vocabulary. My English vocabulary is poor, so it hinders comprehension.*

**Researcher:** *So, you have a problem with basic English, not medical English?* **Informant 2:** *Yes, it's more basic English than scientific English. I find scientific English easier to understand.*”

**Informant 3:** “*Obviously, the difficulty exists. And this in relation to the understanding of medical English, which remains specific and special if we compare it to the English we studied in our childhood. Namely, the medical terms are a little different between French and English.*”

The results obtained show that two participants find the medical terms challenging to understand because it is different from the English studied in pre-med school, while the remaining interviewee faces difficulty with basic English rather than medical English because of his poor English vocabulary and the similarities between medical terms in English and French as he mentioned in the previous question makes scientific English easier for him than basic English.

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### ***Question Five: the impact of language barriers***

The question “*How do English language barriers affect your ability to communicate with international colleagues or to interpret clinical research findings?*” gauges the extent to which the language barriers impact the informants’ ability to engage in professional communication with international colleagues and precisely interpret the research findings in English.

**Informant 1:** “*Well, the barriers we face, well, usually it's when we speak with other colleagues, if they have a different accent or if they speak very fast, it's not easy. And sometimes it's with to find the right books or the right resources to use this for the research. So that's the difficulty we face.*”

**Informant 2:** “*English, as you know, is the world's leading language, and even French-speaking countries are increasingly communicating in English. So, not fully mastering English makes it difficult for me to communicate orally with my international colleagues and understand them, especially with some countries that have a strong accent, such as Egyptians and Indians.*”

**Informant 3:** “*This is related to language comprehension, particularly the difficulty some people have with the speed of pronunciation by English speakers, as well as with their accent.*”

The results obtained show that all three interviewees have difficulties in communicating with international colleagues the main reasons are following fast paced discussions in English and the different accents and pronunciations notably Egyptians and Indians.

### ***Question Six: coping mechanisms***

The question “*How do you manage situations where language limitations impact your ability to fully understand or apply research findings?*” seeks to explore the approaches and strategies used by the interviewees to face the language-related difficulties when trying to understand or apply research findings.

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**Informant 1:** *“Well, sometimes for the research, it's not easy to find the books, so we use most of the time, we use research on the internet. Online. And sometimes where we were starting to practice in English, we're using Google Translation. Then with time, we find that it was maybe kind of wrong. Researcher: Yeah, doesn't give you the exact words. Informant 1: Yeah, so we were more used to use English and clinical medicine terms, so we find sometimes on the internet.”*

**Informant 2:** *“I try to use translation methods to identify and fill in my gaps, particularly through the internet. Google Translate or instant oral translation applications like Google Translate. And lately, there's artificial intelligence, which has its place and can be a huge help.”*

**Informant 3:** *“In the past, we had access to books, i.e. dictionaries of traditions, including “Larousse Médical”. And nowadays, fortunately, we have access to networks, including the Internet, artificial intelligence. So, we are a little bit helped, if I dare say so, to translate in real time and to have a better understanding of medical English.”*

The data gathered from this question shows that all three doctors (100%) use translation and internet applications and artificial intelligence to deepen their understanding and help with the accurate application of the research findings.

### ***Question Seven: suggested solutions***

The question *“What type of training or resources would you like the hospitals or research institutions to provide to help overcome these language barriers?”* aims to identify the kind of support, strategies, and training that the interviewees believe the hospitals and research institutions should implement to overcome these language barriers and enhance the access and understanding of English medical content.

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**Informant 1:** *“Well, I think the first thing they have to do in the universities, they have to change the French language to English language, because we are all used to speak in French. But nowadays, the English become the language of science. and the thing we find are there is a lot of choice. And it's more easy. Accessible. It's free. In French, it's not free for all the time we have to pay. And all the researches, the new researches are done in English. **Researcher:** Yes, exactly. And do you think that they have to implement like from the start English or just a course or what about the doctors who have already finished their studies? **Informant 1:** No, for me, they have to do it from the beginning so we can all improve our level of English. And even for the researches that are made in English, that will provide us with more information and the last things that have been discovered.”*

**Informant 2:** *“Yes, it's time for English to regain its place in Algeria. This is necessary in universities and hospitals, firstly through the introduction of a scientific English module in the medical studies curriculum and also through the switch of oral and written communications from French to English. This will allow young doctors to become increasingly fluent in English. It's becoming part of their daily lives.”*

**Informant 3:** *“Certainly. And this through training in medical English, which remains specific and necessary for the near future. Namely, medical news are all established in English. On the other hand, it is also necessary to promote training abroad to have a better exchange”.*

The suggestions given by the participants focused on implementing a training in medical English and even going a step further to switch the language used completely from French to English. Some participants also suggested promoting training abroad (i.e. to English speaking countries) to have better exchange with health professionals.

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### ***Question Eight: impact of English on Algerian doctors' global contribution***

In The question “*How do you think improved English proficiency level would impact Algerian doctors' contribution to global medical research and practice?*” the interviewees were given the chance to express their thoughts on how improved English level could influence their ability to contribute effectively to the global medical community.

**Informant 1:** “*Well, like we said before, since all the researches nowadays are made in English, so it's easier to find all these updates. In France, there is not a lot of updates since in English there is American studies, studies in UK, in Australia, in Canada. So, it provides with a lot of updates, a lot of insights and everything. Researcher: Yes. And so, you think that Algerian doctors who have good English proficiency, they perform better in like global contributions and everything? Informant 1: Yeah, I think it will help to improve all together and it will be beneficial for us.*”

**Informant 2:** “*To be able to enter the field of scientific research and contribute globally, you need a perfect grasp of English. What's promising is that more and more young doctors are interested in English and have a better grasp of the language than previous generations.*”

**Informant 3:** “*As I said before, to have access to novelties and to be, of course, aware of what is happening overseas, so abroad. And to have a self-development, on the one hand, and improve the take care of hospitals, on the one hand, and a better care of patients according to global standards.*”

It is observed from the answers gathered from the participants that 100% of them think that improved English proficiency is beneficial to the Algerian doctors' contribution to global research and practice and for self-development and communication with peers abroad. Also, one participant mentioned that the abundance of new studies published in English from different

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countries compared to those published in French so a better grasp of the English language can greatly impact their role in the global medical community.

### ***3.3 Results / Findings Interpretation***

This segment attempts to discuss and interpret the primary outcomes of this investigation. The principal findings that are gathered from each research instrument will be discussed. The questionnaire and the interviews have helped the investigators to collect a vast quantity of data.

#### ***3.3.1 Interpretation of Questionnaire Data:***

This section will discuss the data collected from the questionnaire that was prepared for the purpose of getting information about the English language challenges faced by Algerian doctors during their professional careers. The idea behind this questionnaire is to gather data from doctors at different stages of their profession, different English proficiency levels, and different levels of exposure to English in their profession. By analysing the participants' responses, this section aims to identify common challenges, recurring themes, and how these doctors perceive the role of English in today's modern medical practice.

The demographic profile of the participants shows a relative balance between male and female respondents (i.e. balanced gender distribution) providing equal representation of male and female perspectives on English language difficulties. This balance is important as it ensures that both male and female opinions are taken into consideration when it comes to English language barriers faced in their profession. When it comes to professional experience the data gathered from the questionnaire shows that a large portion of the participants had between five and ten years of medical practice indicating the predominance of mid-career doctors which is an

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important phase as there are more chances for specialization, cross-border collaboration, and involvement in research. This also offers more exposure to English-language medical resources (research papers, conferences, guidelines...etc.) than early-career doctors. The participation of both highly experienced practitioners and newly graduated doctors provides a larger view of how English language barriers evolve over time, allowing for a comparative analysis to determine whether these challenges lessen with more experience or persist regardless of professional experience.

It was established in the previous chapter (see chapter 1 section 2, subsection 1) that the Algerian doctors have done the entirety of their medical education and academic training exclusively in French due to the country's ties with colonial history. This French-dominant background has profoundly influenced their confidence and limitations regarding the English language. Although English is considered the primary language of science and global medical research and practice, yet the participants' self-evaluated English proficiency level indicates that most of them do not feel well equipped to navigate effectively in this linguistic environment, as the majority of them reported only a moderate level with few rating their English as good or excellent. This suggests a modest confidence in using English in a professional setting. Implying that their English capabilities may not be enough for actively participating in today's English-dominated medical field. Additionally, the existence of some poor self-assessed English level among the participants indicates the challenges faced especially when they are expected to conduct research, interpret complex medical terminology, or communicate with international colleagues.

The study further demonstrates a severe lack of exposure to English-language professional content and learning opportunities; as reflected by the exceptionally low rates of attendance at

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English-language medical conferences. Furthermore, while these doctors recognise the importance of accessing the journals and research papers published in English, many struggle with comprehending these materials due to the linguistic barriers, which hinders their ability to stay up-to-date with the latest advancements and innovations in medicine.

In the Algerian French-centred medical education system, the absence of formal English language training creates graduates with substantial linguistic deficiencies that hinder both comprehension and communication in English in professional contexts, particularly medical conferences and interpreting medical content. These difficulties are deeply connected to how these doctors acquired their English skills, as previously stated, (see chapter 1, section 2, subsection 2), Algerian Medical students study English for seven years prior to entering university, and their medical studies were done exclusively in French this resulted in most of these doctors' exposure to English coming from self-study and informal contact through social media and TV programs with minimal focus on specialized language creating an unbalance between the main skills: reading, writing, listening, and speaking.

Among the participants, listening and speaking were the most problematic skills. Doctors reported having difficulties in understanding spoken English in the medical conferences due to technical vocabulary limitations, difficulty following fast paced presentations and unfamiliarity with different accents. Such constraints impede knowledge acquisition and self-confidence lowering their chances to participate actively in medical conferences. Speaking was also identified as a difficulty by many participants, more precisely in professional contexts due to lack of confidence and linguistic limitations stemming from a severe limited practice and absence of an environment requiring regular English communication.

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Reading was the least chosen skill by the participants however, it still posed a challenge, notably when understanding and accurately interpreting complex medical materials (journals, research papers...etc.). Respondents indicated that they could grasp the broad concept but struggled with technical terminology and methodological details without additional explanation. Such constraints impact their ability to utilize the cutting-edge research, most of which published in English, in today's medical landscape.

Writing skill was mostly viewed as skill least frequently needed in the daily medical practice. However, doctors who are concerned with international collaboration would think otherwise as it is a crucial productive skill to contribute to publications or to interact with colleagues in a formal written form.

These findings align with similar research conducted in comparable non-English speaking contexts that are previously mentioned (see chapter 1, section 6), for instance, a similar descriptive case study in a Turkish setting by Mustafa Naci KAYAOĞLU and Raşide DAĞ AKBAŞ (Kayaoğlu& Akbaş 2016), results indicated that speaking was the most needed skill, followed by listening, reading, and writing respectively. Or the one by Chia et al.'s (Chia et al., 1999) where they concluded that in their freshman English course, listening was considered the most important skill.

English has become the undisputed language of scientific discourse as it is considered as the lingua franca of medical publications and conferences across the world. The findings of this study align with this as the participants unanimously acknowledge the importance of English for the purposes of international collaboration, accessing the latest medical content, career development and training opportunities. They also show that the language barriers have a significant impact on these doctors' professional development and worldwide integration. Such

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constraints create a gap between their medical expertise and the lingua franca of the scientific advancements.

To overcome these barriers these doctors find themselves resorting to different strategies such as translation tools (e.g. Google Translate) when dealing with complex terminology, language learning apps, EMP courses and workshops, and interacting with native or fluent English speakers, to improve their general English or acquire domain-specific vocabulary. This self-motivated approach arises from the lack of a structural and formal support.

Although this self-study is valuable and reflects a high degree of commitment and flexibility, it often lacks systemic guidance and feedback, and it is not a viable long-term solution. It also highlights a deep-rooted issue: the absence of institutional support for the English language development in the medical domain. The participants proposed concrete, long-term solutions in order to overcome these barriers and reshape the medical education in Algeria. Advocating for curricular reform and early integration of English, especially EMP from the start of the medical education. Additionally, a substantial number of the participants wanted a complete shift to English and eliminate what they deemed “outdated” French language, and that it should start well before university.

The results of this study are consistent with prior research on this topic, for instance, an article by Ould Si Bouziane about teaching EMP at the Intensive Language Teaching Center of Mostaganem 2020, the findings show that all the participants are in need to learn English, and stressed the need for an institutional support. Another study by Talha & Benhattab in 2022 about teaching medical English to future medical professionals where their findings corroborates this study’s results.

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### 3.3.2 Interpretation of Interviews Data

Boasting over a decade of experience each, the informants' answers provide valuable insights into how experienced doctors educated exclusively in French have adapted (or struggled to adapt) to the English-dominated medical landscape. Although the interviewees' daily usage of English-language materials varied, they all felt that these resources are essential for keeping up with the most recent developments in medicine, especially with the abundance and easy access to English resources online. This aligns with the findings of the questionnaire where the majority of participants acknowledged the importance of English for remaining well-informed about contemporary medical progress.

The interviews highlight the lack of institutional support for English language, one interviewee specifically cited that the limited documentation in English in the university libraries hinders their exposure to English in their formation echoing a point mentioned in the questionnaire where many participants reported limited academic exposure as a major challenge.

Regarding participation in English-language conferences, the interviewees' answers showed a recurring pattern of initial difficulty that was followed by a progressive adaptation. Initial interactions were challenging mostly due to their prior French-exclusive education, but overtime, and frequent exposure the difficulty gradually became manageable. Additionally, one interviewee pointed out the similarities in scientific vocabulary between English and French, facilitating the adaptation process.

Interestingly, the interviewees reported different barriers encountered when consulting scientific literature, where two of them struggled to comprehend English-language clinical studies due to the complex scientific terminology, while *informant 2* reported that his issue

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stemmed from basic/general English and poor vocabulary rather than medical English. Furthermore, the data collected reveal a critical challenge regarding spoken communication and speech comprehension, especially when collaborating with peers and international colleagues at multinational conferences and face-to-face discussions, where different accents and fast-paced conversations significantly hinder these doctors' active engagement in international professional settings. These results mirror the findings from the questionnaire data, where listening and speaking were the most problematic skills.

The data collected also illustrate that when language barriers impacted their ability to comprehend and accurately interpret clinical studies, all three participants employed similar strategies and coping mechanisms; their main approach required using translation tools (e.g. Google Translate) and some other Artificial Intelligence platforms to bridge the comprehension gap and decipher complex articles. Additionally, the participants emphasized the importance of online resources to compensate for the limited English documentation in university libraries.

The growing reliance on online resources and AI platforms shows the Algerian doctors' dedication and commitment to overcome the language barriers and adapt to the English-dominated medical field. While useful, these tools only offer a temporary solution, it also highlights the absence of institutionalized training or formal support to help in building sustained competence.

The suggestions proposed by the participants reveal a deep discontent with how Algerian universities' medical education is far from global standards. Their call for transitioning from French to English as a primary language of instruction underscores a recognized disparity between the Algerian language of instruction and the universal language of medicine. It is a push for an in-depth reassessment of the entire medical education in the Algerian medical universities,

### Chapter Three: Data Analysis, Suggestions and Recommendations

as they suggest an early introduction of English in the medical curriculum, specialized training workshops in medical English, and “overseas” training opportunities and international partnerships for better exposure. These suggestions for an overall systemic reform prioritize long-term proficiency development over band-aid or temporary solutions, reflecting the professional awareness and dedication of the Algerian doctors.

Additionally, the participants think that a strong grasp of the English language by the Algerian doctors transcends their own professional development, but it also represents a huge advantage for Algeria’s entire medical field. The interviewees claim that strong language proficiency leads to better global contribution, easier access to cutting-edge research, and finally better care for the patients.

To conclude, the data collected provide empirical confirmation for both initial hypotheses. The first hypothesis that “language barriers significantly affect the performance of Algerian doctors, educated in French, during English-language medical conferences and their access to up-to-date research” is confirmed and supported by the findings. Second the results also validate the hypothesis that “Limited English proficiency and complex specialized vocabulary could be the main barriers faced by the Algerian doctors in the medical conferences and research”, as demonstrated by the collected data. The findings also identified more challenges such as understanding different accents and keeping up with fast paced conversations, limited access to materials in universities, lack of regular practice.

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### *3.4 Limitations of the Study*

Despite the importance of this study in highlighting the language barriers faced by the Algerian doctors and their impact on their global contribution, several limitations affected the scope and depth of this research.

The sample size was relatively small, and can not represent the whole population of Algerian medical practitioners. Due to several constraints and limited access to larger groups of participants, the data was collected from a small number of doctors which may not reflect the different experiences across regions, other medical faculties and health institutions.

Additionally, not all the respondents took the questionnaire seriously as some answers were given out of context, or just putting dots in the open-ended questions. The questionnaire was distributed to over 100 doctors but not all of them have responded resulting in only 60 answers.

Furthermore, the researchers could not conduct all three interviews in English due to the English proficiency of the doctors, the questions had to be translated to French so the participants could express themselves freely showing the impact of the language barriers that this research is trying to overcome. Besides, time constraints and limited resources hindered the possibility of conducting in-depth interviews that could have provided richer data and a deeper understanding of the issue.

Finally, the research heavily relied on self-reported data, while this method is useful, it is subject to potential biases, for example, self-assessment of the English proficiency level could have been overestimated or underestimated by the participants.

Despite all these limitations, the findings still offer valuable insights and can serve as a foundation for future research.

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### *3.5 Suggestions & Recommendations*

Taking into account the challenges identified in the sections above, several suggestions and proposals arise to aid the Algerian doctors navigate today's English-dominated medical landscape, and overcome the barriers to improve their contribution to global medical research.

The suggestions are as follows:

- The research could reach more Algerian doctors who graduated from other medical universities; it could be tackled by other researchers from other universities in Algeria.
- The research could be done with another sample population as it is seen in the questionnaire data of this study, only few participants (5% to be exact) are newly graduated doctors. The idea behind this is to see if new-careers have more grasp of the medical English language and struggle less than the population chosen in this study.
- Gradual transition to English as a language of instruction in the Algerian medical universities and offering language development support for practicing doctors.
- The introduction of the medical English module early in the medical curriculum in the Algerian medical universities to equip the future generation of doctors with the language skills needed in the global medical practice.
- Implementing EMP courses for doctors who have already completed their studies to strengthen their English language skills (i.e. speaking, listening, reading, writing) and improve their research and communication skills.
- Offer international partnerships with anglophone medical centers abroad to put the Algerian practitioners in an immersive environment where they can communicate exclusively in English.

## Chapter Three: Data Analysis, Suggestions and Recommendations

- Create opportunities for Algerian doctors to participate more frequently in international conferences and webinars to familiarize them with medical English discourse.
- Expand the access to English medical materials (i.e. journals, articles, books...etc.) in university libraries to ensure all doctors have access to up-to-date English medical publications and guidelines.
- Organize frequent English medical training workshops in medical institutions to improve daily professional use.
- Integrate technology tools into daily practice and offer training for practitioners on how to effectively use these tools in research and self-study.

### ***3.6 Conclusion***

This chapter enveloped three important sections, namely, information examination, findings interpretation, and what the researcher suggested as solutions and recommendations. Starting with the description of the data gathered through the questionnaire and interview, followed by an in-depth analysis of the findings, identifying the main barriers, it also discussed the coping mechanisms adopted by the doctors, the impact of these barriers and the participants' proposed solutions. Finally, ending this chapter by giving suggestions and recommendations for improvement.

# **General Conclusion**

## General Conclusion

This dissertation set out to explore the important problem of the English language barriers encountered by the Algerian doctors who were formed exclusively in French particularly in the context of participating in English-language medical conferences and accessing latest medical research. In the first chapter of this study it was established that English language has become the lingua franca of medical publications and international conferences, and is the primary language of scientific discourse, however, due to the historical background linking Algeria and France, Algerian medical universities still use French as the exclusive language of instruction.

The disconnect between the language of instruction in the Algerian medical universities and the global language of scientific research and advancements is a central issue highlighted by this study, as it places the Algerian doctors at a disadvantage. The French exclusive formation they receive massively hinders their ability to navigate effectively in this English-dominated global medical landscape.

The main purpose of this study is to assess the English proficiency level among the Algerian doctors and to examine how they are affected by the language barriers when participating in medical conferences conducted in English and accessing up-to-date research. It also sought to identify the specific challenges faced by these doctors in their medical practice. Furthermore, the study sheds light on the coping mechanisms and strategies these doctors use to try to overcome their language-related challenges. Finally, this study proposed practical recommendations and suggestions to help integrate the Algerian doctors into the international medical community by improving their English language proficiency.

Two questions were asked at the beginning of the study:

- ❖ To what extent do language barriers affect Algerian doctors' performance in conferences and medical research?
- ❖ What are the main challenges faced by these doctors in English language conferences and medical research?

## General Conclusion

For the previous questions, it is hypothesized that “Language barriers significantly affect the performance of Algerian doctors, educated in French, during English-language medical conferences and their access to up-to-date research.” and “Limited English proficiency and complex specialized vocabulary could be the main barriers faced by the Algerian doctors in the medical conferences and research”.

The second chapter discussed the design and methodology followed by the researchers in this study. Starting with the objectives and motivations of the study and giving detailed definitions of fundamental concepts such as the research approaches and tools/instruments. The second chapter also gave an idea about the setting of the study and the sample population chosen, and the procedures followed in the process of analysing the data collected. It also addressed the ethical consideration, the validity and reliability of the study.

The third chapter is divided into three main chapters, data analysis, interpretation of the results, and recommendations and suggested solutions. After successfully gathering the data needed from the questionnaire and the interviews, the researchers moved to analyse the data collected using graphs, pie charts and tables. Results have been drawn with reference to data analysis and a full interpretation has been made. Finally, the chapter was closed with suggestions and recommendations.

The results and interpretation of the data gathered provided clear answers to the previously asked research questions, and confirmed both hypotheses put forward by the researchers. The data collected provided more insights and experiences from the participants giving varied answers and practical long-term solutions and recommendations rather than temporary fixes. The absence of institutional support for English language in medical universities is highlighted by the vast majority of the participants as the main issue, they also push complete reassessment of the

## General Conclusion

language policies in the Algerian education and the shift the English as the primary language of instruction instead of French.

To conclude, some recommendations were suggested by the researchers to address the limitations of this study that could be beneficial for future researchers. Furthermore, the researchers also put forward concrete recommendations and suggestions to improve the English proficiency level among the Algerian practitioners and ensure a better competence for the future doctors. These proposed solutions could lessen the impact of the language barriers encountered by these doctors and improve their integration into the global medical community.

# **Bibliography**

## Bibliography

- AKBAŞ, M. N. (2016). An Investigation into Medical Students' English Language Needs. *Participatory Educational Research (PER)* , p. 69.
- Alexander, O., Argent, S., & Spencer, J. (2008). *EAP essentials. A teacher's guide to principles and practice*. Garnet Publishing.
- Amara, N. (2025). Implementing English as a medium of instruction in Algerian higher education: Facts and challenges. *ATRAS*, 6(1), 34-45.
- Ammari, M. (2022). *Investigating the Use of English as a Lingua Franca between the Algerian Doctors and their Chinese Counterparts* [Master's dissertation, Ibn Khaldoun University of Tiaret-Algeria]. University of Tiaret Repository.
- Antić, Z. (2016). Teacher Education in English for Special Purposes. *Acta Facultatis Medicae Naissensis*, 33(3), 211-215. DOI: 10.1515/afmnai-2016-0022.
- Asgari, J. (2015). A Blended-Learning Setting in English for Medical Purposes Course Incorporating Competencies. *International Journal of Advanced Corporate Learning*, 8(1), 12-15.
- Basturkmen, H. (2010). *Developing Courses in English for Specific Purposes*. Palgrave Macmillan.
- Beitler, L., & Mac Donald, B. (1982). *Instrumental English: English for medical professions*. McGraw-Hill.
- Belaskri, K. (2017). The Linguistic Gap in Doctor-Patient Communication in Algeria. *Language and Linguistics*, 41(2), 1-15. DOI: 10.17951/lsmll.2017.41.2.1

## Bibliography

- Belcher, D. (2009). *English for specific purposes in theory and practice*. University of Michigan Press.
- Belmihoub, K. (2018). Language Attitudes in Algeria. *Language Problems & Language Planning*, 42(2), 111-172.
- Benabed, A (2011). *The implementation of the competency-based approach in the Algerian middle school: A tentative analysis of constraints and obstacles*[Magister thesis, Abdelhamid Ibn Badis University of Mstaganem-Algeria]. University of Mostaganem Repository.
- Benrabah, M. (2013). *Language Conflict in Algeria: From Colonialism to Post-Independence*. Multilingual Matters.
- Bosher, S., &Smalkoski, K. (2002). From needs analysis to curriculum development: Designing a course in health-care communication for immigrant students in the USA. *English for Specific Purposes*, 21(1), 59-79.
- Boukous, A. (1995). La langue berbère: maintien et changement. *International Journal of the Sociology of Language*, (112), 9-28.
- Boumaza, A.(2023). English for Medical Purposes in Algeria: Challenges and Solutions. *ELWAHAT Journal for Research and Studies*,16(1), 01-16.
- Chia, H.-U. J.-L. (1999). English for college students in Taiwan: A study of perceptions of English needs in a medical context. *English for Specific Purposes*, 18, 107-119.
- Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed methods approaches. 2nd ed, 18. (sage, Ed.)

## Bibliography

- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research. 4th ed.* Pearson.
- Dahda, N., &Hocine, N. (2020). Evaluating the Cultural Content of Algerian EFL Textbooks: The Case of EFL Textbooks For Middle School Pupils. *Journal of Arabic Language Sciences and Literature, 12(2)*, 2051-2065.
- Dearden, J. (2016). *English as a medium on instruction: A growing global phenomenon. for medical purposes.* University of Oxford.
- Djaileb, F. (2018). Challenges of Teaching English for specific purposes in Algeria: the case of English in medicine. *The International Journal of Social Sciences and Humanities Invention 5(11)*, 5072-5074. DOI:10.18535/ijsshi/v5i11.02
- Djebbari, Z.,&Djebbari, H. (2020). Language Policy in Algeria: an outlook into reforms. *Ai-Lisaniyyat, 26(1)*, 40-60.
- Dudley-Evans, T., & St. John, M. J. (1998). *Developments in English for specific purposes: A multi-disciplinary approach.* Cambridge University Press.
- Grandguillaume, G. (1983). *Arabisation et politique linguistique au Maghreb.* Maisonneuve & Larose.
- Hone, J. J. (2024). Embracing global health in medical education: A necessity for modern doctors. *JACC, 29(17)*.
- Hutchinson, T., & Waters, A. (1987). *English for specific purposes: A learning-centered approach.* Cambridge University Press.
- Hyland, K. (2006). *English for Academic Purposes: An Advanced Resource Book.* Routledge.

## Bibliography

- Jordan, R. R. (1997). *English for Academic Purposes: A Guide and Resource Book for Teachers*. Cambridge University Press.
- Kennedy, C., & Bolitho, R. (1984). *From General English to ESP: Bridging the Gap*. Oxford University Press.
- Ko, S. (2024). An analysis of nursing students' EMP needs. *Modern English Education*, 25, 361-375.
- Laggoun, B. R., & Benmoussat S. (2023). Switching Between Two Foreign Languages in English For Medical Purposes Course: Impact on Medical Terminology and Vocabulary Comprehension. *ALTRALANG Journal*, 5(3), 242-258.
- Lohfeld, L. &. (2002.). Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality & Quantity*, , p. 46.
- Maher, J. (1986). English for medical purposes. *Language Teaching*, 19(2), 112-145.
- Makay, R., & Mountford, A.J. (1978). *English for specific purposes: A case study approach*. Longman.
- Maraf, B & Ulker, O. (2022). The booming wave of English in the linguistic landscape in Algeria: Timeline of the presence English language in Algeria bottom-up signs. *English Today*, 39(4), 1-8.
- Mostari, H. (2004). A Sociolinguistic Perspective on Arabisation and Language Use in Algeria. *Language Problems and Language Planning*, 28(1), 25-43.

## Bibliography

- Napier, A. D., Depledge, M., Knipper, M., Lovell, R., Ponarin, E., Sanabria, E., & Thomas, F. (2019). *Culture matters: using a cultural contexts of health approach to enhance policy-making*. WHO.
- Ortega, P., & Prada, J. (2020). Words matter: Translanguaging in medical communication skills training. *Perspectives on Medical Education*, 9(1), 01-05.
- Ortega, P., Pérez, N., Robles, B., Turmelle, Y., & Acosta, D. (2019). Strategies for Teaching Linguistic Preparedness for Physicians: Medical Spanish and Global Linguistic Competence in Undergraduate Medical Education. *Health Equity*, 3(1), 312-318.
- Ould Si Bouziane, S. (2020). Towards Teaching English For Medical Purposes at the Intensive Language Teaching Center of Mostaganem. *Revue Maghrébine des Langues*, 11(1), 05-13.
- Patton, M. (2001). *Qualitative Research & Evaluation Methods* (3rd ed ed.). Thousand Oaks, CA: SAGE Publications.
- Pavel, E. (2021). English for medical purposes: Specific needs and challenges. In M. Burada, O. Tatu & R. Sinu (Eds.), *Exploring Language Variation, Diversity and Change*. Cambridge Scholars Publishing.
- Polit, D. F. (2001). . *Essentials Nursing Research*. 6th ed. (Lippincott, Ed.) Philadelphia.
- Ramírez-Castañeda, V. (2020). Disadvantages in preparing and publishing scientific papers caused by the dominance of the English language in science: The case of Colombian researchers in biological sciences. *PLOS ONE*, 15(9).
- Robinson, P. C. (1991). *ESP today: a practitioner's guide*. Prentice Hall International.

## Bibliography

- Romane, K., & Bahloul, A. (2022). The Importance of Teaching English For Medical Purposes to Medical Doctors at Batna Hospital University Centre. *social and human sciences review*, 23(2), 505-518.
- Rouabah, S. (2022). Multilingualism in Algeria: educational policies, language practices and challenges. *Journal of the British Academy*, 10(4), 21-40.
- Salkind, D. C. (2002). *Handbook of Research Design & Social Measurement*. SAGE Research Methods Online
- Talha, B., & Benhattab, A. L. (2022). The Pedagogical Challenges to Teaching English For Medical Purposes: The Case of The Faculty of Medicine at Sidi Bel Abbes University. *Revue des recherches éducatives et didactique*, 11(3), 463-480.
- Tremblay, S. (2012). *Study on linguistically and culturally adapted health services: A Pan-Canadian portrait*. Sultrem Inc.
- Ursa, O., Muresan, O., Marta, M., & Colibaba, A. (2018). *English for medical purposes: Current methodology and practical applications*. Editura Medicală Universitară "Iuliu Hațieganu".
- Yilmaz. (2013). *Teaching grammar in ESP classrooms*. Academic Press.

# Appendices

## Appendices

### **Appendix 1: French Questionnaire**

1. Vous êtes ?

- Homme
- Femme

2. Quel est votre niveau d'expérience professionnelle en tant que médecin ?

- Moins que 5 ans
- Entre 5 et 10 ans
- Entre 10 et 20 ans
- Plus que 20 ans

3. Quel est votre niveau actuel de maîtrise de l'anglais ?

- Débutant
- Intermédiaire
- Intermédiaire supérieur
- Avancé

4. À quelle fréquence assistez-vous à des conférences médicales présentées en anglais ?

- Jamais
- Rarement
- Occasionnellement

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- Fréquemment

5. Comment évaluez-vous votre capacité à rechercher et à comprendre des recherches médicales publiées en anglais ?

- Excellente
- Bonne
- Moyenne
- Mauvaise

6. Comment avez-vous acquis vos compétences en langue anglaise ?

- Education scolaire, des cours et ateliers
- Auto-apprentissage grâce à des ressources et des livres en ligne
- Interaction avec des anglophones en ligne
- Autre :

7. Quel aspect des compétences linguistiques en anglais est le plus difficile pour vous ?

- Lecture
- Orale
- Ecoute
- Rédaction

8. Quelle est la principale difficulté que vous rencontrez lorsque vous participez à des conférences médicales en anglais ?

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- Comprendre des termes médicaux complexes en anglais
- Grammaire et construction de phrases
- Communiquer clairement ses idées en anglais
- Suivre des discussions rapides et des accents différents
- Autre :

9. Quels défis rencontrez-vous lorsque vous recherchez des articles médicaux publiés en anglais ?

- Comprendre la terminologie et le jargon médicaux complexes
- Comprendre le sens global du texte
- Identifier les principales constatations et conclusions
- Traduire et interpréter le contenu avec précision
- Autre :

10. Comment les barrières linguistiques affectent-elles votre confiance lors de présentations en anglais dans conférences médicales ?

- Considérablement
- Modérément
- Légèrement
- Pas du tout

11. Quelles stratégies utilisez-vous pour surmonter les barrières linguistiques ?

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- Utiliser des outils de traduction (ex : Google Translate)
- Consulter des collègues ou des mentors bilingues
- Assister à des ateliers et cours d'anglais médical
- Pratiquer avec des anglophones natifs ou qui parlent couramment l'Anglais
- Autre :

12. Dans quelle mesure est-il important pour les médecins algériens d'améliorer leur niveau de maîtrise de l'anglais pour une collaboration médicale mondiale ?

- Extrêmement important
- Très important
- Assez important
- Pas important

13. Pourquoi pensez-vous qu'améliorer le niveau de maîtrise de l'anglais est important pour les médecins algériens ?

Votre réponse :

14. Selon vous, que devraient faire les facultés de médecine algériennes pour surmonter ces barrières linguistiques ?

Votre réponse :

## **Appendix 2 : English Questionnaire**

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1- What is your gender?

- Male
- Female

2- What is your level of professional experience as a doctor?

- Less than 5 years
- Between 5 and 10 years
- Between 10 and 20 years
- More than 20 years

3- What is your current level of English proficiency?

- Beginner
- Intermediate
- Upper intermediate
- Advanced

4- How often do you attend medical conferences conducted in English?

- Never
- Rarely
- Occasionally
- Frequently

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5- How do you rate your ability to research and understand up-to-date medical data published in English?

- Excellent
- Good
- Moderate
- Poor

6- How did you acquire your English language skills?

- Formal education or course
- Self-study through online resources and books
- interaction with English speakers online
- Other:

7- Which aspect of English language skills is most challenging for you ?

- Reading
- Speaking
- Listening
- Writing

8- What is the primary difficulty you face when participating in English medical conferences?

- Understanding complex medical terms in English

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- Grammar and sentence construction
- Communicating ideas clearly in English
- Following fast-paced discussions and different accents
- Other:

9- What challenges do you encounter when researching medical articles published in English?

- Understanding complex medical terminology and jargon
- Grasping the overall meaning of the text
- Identifying key findings and conclusions
- Translating and interpreting the content accurately
- Other:

10- How do language barriers affect your confidence in presenting at English speaking medical conferences?

- Significantly
- Moderately
- Slightly
- Not at all

11- What strategies do you use to overcome the language barriers?

- Using translation tools (eg: Google Translate)

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- Consulting bilingual colleagues or mentors
- Attending medical English workshops and courses
- Practicing with native or fluent English speakers
- Other:

12- How important is it of Algerian doctors to improve their English proficiency level for global medical collaboration?

- Extremely important
- Very important
- Somewhat important
- Not important

13- Why do you think improving English proficiency level is important for Algerian doctors?

Your answer:

14- What do you think Algerian Medical Faculties should do to overcome these language barriers?

Your answer:

### **Appendix 3: *French Interview Questions***

- Depuis combien de temps pratiquez-vous la médecine ?
- A quelle fréquence utilisez—vous des ressources en Anglais dans votre pratique médicale ? et est-ce nécessaire pour vous ?

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- Pouvez-vous décrire votre expérience lors d'une conférence médicale menée en Anglais ?
- Quelles difficultés rencontrez-vous lorsque vous lisez des études cliniques complexes ou des revues en Anglais ?
- Comment les barrières linguistiques influencent-elles votre capacité à communiquer avec des collègues internationaux ou à interpréter les résultats de recherches cliniques ?
- Comment gérez-vous les situations où les barrières linguistiques affectent votre capacité à comprendre ou à appliquer les résultats de recherche ?
- Quels types de formations ou de ressources souhaiteriez-vous que les hôpitaux ou les institutions de recherche offrent pour aider à surmonter ces barrières linguistiques ?
- Comment pensez-vous qu'une meilleure maîtrise de l'Anglais pourrait influencer les contributions des médecins algériens à la recherche médicale et à la pratique à l'échelle mondiale ?

### **Appendix 4: *English Interview Questions***

- How long have you been practicing medicine?
- How often do you rely on English language resources in your daily medical practice?  
And is it necessary for you?
- Have you ever attended a medical conference conducted in English? Can you describe your experience?

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- When it comes to reading clinical studies or specialized English journals, what are the main difficulties you have encountered?
- How do English language barriers affect your ability to communicate with international colleagues or to interpret clinical research findings?
- How do you manage situations where language limitations impact your ability to fully understand or apply research findings?
- What type of training or resources would you like the hospitals or research institutions to provide to help overcome these language barriers?
- How do you think improved English proficiency level would impact Algerian doctors' contribution to global medical research and practice?

### **Appendix 5: *Informant 1 interview***

**Interviewer:** Hello, how are you?

**Interviewee:** I'm fine, thanks, and you?

**Interviewer:** I'm good. We're going to start today our interview about Algerian doctors who are educated in French and the language barriers they face when attending English language conferences and researching up-to-date data.

**Interviewee:** Okay, let's start.

**Interviewer:** How long have you been practicing medicine?

**Interviewee:** I have been practicing medicine since 2012, so it's 13 years now. Yes, 13.

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**Interviewer:** And how often do you rely on English language resources in your medical practice?

**Interviewee:** Well, occasionally, since we use French most of the time, but sometimes we use English because there is a lot of resources in English language.

**Interviewer:** Okay, can you describe your experience attending a medical conference conducted in English?

**Interviewee:** Well, my experience, it was, in the beginning, it was not easy because we were not used to use English because we may, we have done our studies in French, so it took a little bit of time to be used to it. In the beginning, we were using like Google Traduction and sometimes the words we were using weren't correct. So, with time, we improved and it became more easy to use English language.

**Interviewer:** Okay, that's good. What specific difficulties do you face when reading complex clinical studies or journals in English?

**Interviewee:** Well, the difficulties we face, sometimes there is not a lot of books. For example, for the research in English, there is many resources, but in French, we don't have. So sometimes to understand some words, clinical words in English, it's not easy, but we have to do a lot of research to find the right terms to use for medical and clinical works.

**Interviewer:** Thank you. And how do English language barriers affect your ability to communicate with international colleagues or to interpret clinical research findings?

**Interviewee:** Well, the barriers we face, well, usually it's when we speak with other colleagues, if they have a different accent or if they speak very fast, it's not easy. And sometimes it's with to

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find the right books or the right resources to use this for the research. So that's the difficulty we face.

**Interviewer:** Yeah, exactly. So especially if you speak with someone who's like from England, from Liverpool, the Scouts, it's very difficult.

**Interviewee:** Okay.

**Interviewer:** Now, how do you manage situations where language limitations impact your ability to fully understand or apply research findings?

**Interviewee:** Well, sometimes for the research, it's not easy to find the books. So we use most of the time, we use research on the internet.

**Interviewer:** Online.

**Interviewee:** Online. And sometimes where we were starting to practice in English, we're using Google Translation. Then with time, we find that it was maybe kind of wrong.

**Interviewer:** Yeah, doesn't give you the exact words.

**Interviewee:** Yeah. So we were more used to use English and clinical medicine terms. So we find sometimes on the internet.

**Interviewer:** Yes. And can you describe any personal strategies you use to overcome these barriers?

**Interviewee:** Yeah, I try to improve my English, like I have to talk with other friends from other countries who speak English.

**Interviewer:** Yeah, like native English speakers.

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**Interviewee:** Yeah. And we try to communicate. Sometimes we do online conferences.

**Interviewer:** Yes.

**Interviewee:** And sometimes even when we go to other countries.

**Interviewer:** You have to speak.

**Interviewee:** Yeah, there you have to speak their language. You have to speak with them so we can exchange our experience. That's it.

**Interviewer:** What type of training or resources would you like the hospitals or research institutions to provide to help overcome these language barriers?

**Interviewee:** Well, I think the first thing they have to do in the universities, they have to change the French language to English language, because we are all used to speak in French. But nowadays, the English become the language of science.

**Interviewer:** Yes.

**Interviewee:** The English of science are the thing we find are there is a lot of choice. And it's more easy. It's accessible.

**Interviewer:** Accessible.

**Interviewee:** It's free. In France, it's not free for all the time we have to pay. And all the researches, the new researches are done in English.

**Interviewer:** Yes, exactly. And do you think that they have to implement like from the start English or just a course or what about the doctors who have already finished their studies?

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**Interviewee:** No, for me, they have to do it from the beginning so we can all improve our level of English. And even for the researches that are made in English, that will provide us with more information and the last things that have been discovered.

**Interviewer:** And how do you think improved English proficiency level would impact Algerian doctors' contribution to global medical research and practice?

**Interviewee:** Well, like we said before, since all the researches nowadays are made in English, so it's more easy to find all these updates. In France, there is not a lot of updates since in English there is American studies, studies in UK, in Australia, in Canada. So it provides with a lot of updates, a lot of insights and everything.

**Interviewer:** Yes. And so, you think that Algerian doctors who have good English proficiency, they perform better in like global contributions and everything?

**Interviewee:** Yeah, I think it will help to improve all together and it will be beneficial for us.

**Interviewer:** Thank you.

**Interviewee:** Thank you very much.

**Interviewer:** And that will be all.

**Interviewee:** Thank you very much. Thank you for your help.

**Interviewer:** Thank you.

**Appendix 6: *Informant 2 interview***

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**Interviewer :** Bonjour et bienvenue à cette interview. Aujourd'hui, nous allons parler de l'impact de la langue anglaise dans la pratique médicale et la recherche clinique. Merci d'avoir accepté mon invitation.

**Interviewé :** Bonjour mon ami, merci de m'avoir invité.

**Interviewer :** Pour commencer, pouvez-vous nous dire depuis combien de temps vous pratiquez la médecine ?

**Interviewé :** Je suis dans le domaine médical depuis 20 ans. J'ai entamé mes études en 2005. Ça a abouti tout d'abord sur le diplôme de médecine générale, puis j'ai continué avec le cursus de spécialité en pédiatrie. J'ai décroché le diplôme d'études médicales spécialisées en pédiatrie en 2017. Actuellement, je les exerce dans le secteur public.

**Interviewer :** Très bien. Et à quelle fréquence utilisez-vous des ressources en anglais dans votre pratique quotidienne ? Et est-ce que c'est nécessaire pour vous ?

**Interviewé :** Oui, c'est nécessaire. J'utilise des ressources en anglais de façon courante, car les articles scientifiques et études médicales en anglais sont plus abondants et plus intéressants que ceux en français.

Et ça me permet de rester à jour concernant l'actualité scientifique de ma spécialité.

**Interviewer :** Très bien. Avez-vous déjà assisté à une conférence médicale menée en anglais ?

**Interviewé :** Au début, j'ai trouvé un peu de difficultés, puis on s'habitue, car il y a beaucoup de mots scientifiques qui sont similaires avec le français.

**Interviewer :** C'est ça. Et lorsqu'il s'agit de lire des études cliniques ou des revues spécialisées en anglais, quelles sont les principales difficultés que vous rencontrez ?

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**Interviewé :** Oui, je trouve des difficultés car on ne pratique pas l'anglais tous les jours et on n'a pas assez de vocabulaire. Le vocabulaire anglais, il est pauvre, donc ça freine la compréhension.

**Interviewer :** Alors, vous avez un problème avec l'anglais basique, pas l'anglais médical ?

**Interviewé :** Oui, c'est plus l'anglais basique que l'anglais scientifique. L'anglais scientifique, je trouve plus d'aisance à comprendre.

**Interviewer :** Très bien. Et selon vous, comment les barrières linguistiques influencent-elles la communication avec les collègues internationaux et l'interprétation des résultats de recherche ?

**Interviewé :** L'anglais, comme vous le savez, c'est la première langue au monde et même les pays francophones communiquent de plus en plus en anglais. Alors, le fait de ne pas maîtriser l'anglais totalement me donne des difficultés à communiquer oralement avec mes collègues internationaux et à les comprendre surtout avec certains pays qui ont un accent prononcé comme les Égyptiens et les Indiens.

**Interviewer :** Oui, très bien.

**Interviewé :** Surtout les Indiens, ils ont un accent très différent que l'anglais qu'on a étudié à l'école.

**Interviewer :** Oui, même les Égyptiens, ils ont un accent un petit peu particulier.

**Interviewé :** Oui, c'est ça.

**Interviewer :** Et face à ces barrières linguistiques, comment faites-vous pour les surmonter et appliquer correctement les résultats de recherche ?

**Interviewé :** J'essaie d'utiliser les moyens de traduction pour pouvoir cerner et combler mes lacunes grâce à Internet notamment. Google Traduction ou application de traduction orale

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immédiate comme Google Translate. Et dernièrement, il y a l'intelligence artificielle qui a sa place et peut aider énormément.

**Interviewer :** C'est vrai, oui, c'est vrai. Et pensez-vous que des formations et des ressources spécifiques devraient être mises en place dans les hôpitaux ou les institutions de recherche pour aider les professionnels de santé à mieux maîtriser l'anglais ?

**Interviewé :** Oui, il serait temps que l'anglais en Algérie retrouve sa place. C'est une nécessité dans les universités et les hôpitaux, tout d'abord par l'introduction d'un module d'anglais scientifique dans le cursus des études en médecine et aussi par le basculement des communications orales et écrites du français à l'anglais.

**Interviewer :** Très bien. Ça va permettre aux jeunes médecins de maîtriser de plus en plus l'anglais. Ça devient partie de leur quotidien.

Et enfin, selon vous, en quoi une meilleure maîtrise de l'anglais par les médecins algériens pourrait-elle améliorer leur contribution à la recherche médicale et à la pratique au niveau international ?

**Interviewé :** Pour pouvoir accéder au domaine de recherche scientifique et contribuer à l'échelle mondiale, il faut une maîtrise parfaite de l'anglais. Ce qui est prometteur, c'est que de plus en plus de jeunes médecins s'intéressent à l'anglais et ont une meilleure maîtrise de cette langue que les générations qui les précèdent.

**Interviewer :** Oui, c'est ça.

Merci beaucoup pour vos réponses et pour votre temps. Ce fut un échange très enrichissant.

Nous espérons que cette discussion aidera à sensibiliser sur l'importance de la maîtrise de l'anglais dans le domaine médical.

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**Interviewé :** Merci à vous, mon ami, et merci pour l'invitation. C'était un honneur d'être parmi vous.

**Interviewer :** Merci beaucoup.

Bonne journée.

**Interviewé :** Merci.

### **Appendix 7: Informant 2 interview English version**

**Interviewer:** Hello and welcome to this interview. Today, we are going to talk about the impact of the English language in medical practice and clinical research. Thank you for accepting my invitation.

**Interviewee:** Hello my friend, thank you for having me.

**Interviewer:** To begin, can you tell us how long you have been practicing medicine?

**Interviewee:** I've been in the medical field for 20 years. I began my studies in 2005.

It first led to a general medicine degree, then I continued with a specialization in pediatrics. I obtained the specialized medical studies diploma in pediatrics in 2017. I currently work in the public sector.

**Interviewer:** Very good. And how often do you use English-language resources in your daily practice? Is it necessary for you?

**Interviewee:** Yes, it is necessary. I regularly use English resources because scientific articles and medical studies in English are more abundant and more interesting than those in French. It also helps me stay up to date with the latest developments in my specialty.

**Interviewer:** Great. Have you ever attended a medical conference conducted in English?

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**Interviewee:** At first, I found it a bit difficult, but you get used to it because many scientific terms are similar to French.

**Interviewer:** Exactly. And when it comes to reading clinical studies or specialized journals in English, what are the main difficulties you encounter?

**Interviewee:** Yes, I do face difficulties because we don't practice English every day and we lack vocabulary. My English vocabulary is limited, which hinders understanding.

**Interviewer:** So, you have trouble with basic English, not medical English?

**Interviewee:** Yes, it's more with basic English than scientific English. I find it easier to understand scientific content.

**Interviewer:** Very good. And in your opinion, how do language barriers affect communication with international colleagues and the interpretation of research findings?

**Interviewee:** English, as you know, is the most widely spoken language in the world, and even French-speaking countries increasingly communicate in English. So, not having full mastery of English makes it difficult for me to communicate orally with international colleagues and to understand them—especially those from countries with strong accents, like Egyptians and Indians.

**Interviewer:** Yes, definitely.

**Interviewee:** Especially Indians, they have an accent that's quite different from the English we studied at school.

**Interviewer:** Yes, even Egyptians, their accent is a bit unique.

**Interviewee:** That's right.

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**Interviewer:** And in the face of these language barriers, how do you manage to overcome them and correctly apply research findings?

**Interviewee:** I try to use translation tools to grasp and fill in the gaps, especially through the Internet. Google Translate or real-time speech translation apps like Google Translate. And more recently, artificial intelligence plays a role and can be a big help.

**Interviewer:** That's true, yes, very true. And do you think specific training and resources should be provided in hospitals or research institutions to help healthcare professionals better master English?

**Interviewee:** Yes, it's time for English to regain its place in Algeria. It's a necessity in universities and hospitals—first, by introducing a scientific English module in the medical school curriculum, and also by shifting oral and written communication from French to English.

**Interviewer:** Very good. That would allow young doctors to master English more and more. It would become part of their daily life.

And finally, in your opinion, how could better English proficiency among Algerian doctors improve their contribution to medical research and international practice?

**Interviewee:** To access the field of scientific research and contribute globally, you need perfect mastery of English. What's promising is that more and more young doctors are interested in English and have better command of it than previous generations.

**Interviewer:** Yes, that's right.

Thank you very much for your answers and for your time. It was a very insightful discussion. We hope this interview helps raise awareness of the importance of English proficiency in the medical field.

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**Interviewee:** Thank you, my friend, and thank you for the invitation. It was an honor to be here with you.

**Interviewer:** Thank you very much.

Have a good day.

**Interviewee:** Thank you.

### **Appendix 8:***Informant 3 interview*

**Interviewer:** Bonjour et bienvenue à cette interview. Aujourd'hui, nous allons parler des défis auxquels sont confrontés les médecins algériens formés en français lorsqu'ils participent à des conférences en anglais où ils recherchent des données médicales actualisées dans cette langue. Merci d'avoir accepté mon invitation.

**Interviewee:** Bonjour, cher ami, et ça sera avec plaisir. Merci. Pour commencer, pouvez-vous me dire depuis combien de temps vous pratiquez la médecine ? Si on peut le dire depuis ma naissance. Si j'ose dire, bien sûr. A savoir que c'est un héritage familial. J'ai débuté mes études en médecine en 2006 et j'ai entamé ma spécialité en 2014.

**Interviewer:** Et vous faites quoi comme spécialité ?

**Interviewee:** Pour un début, j'étais résident en réanimation anesthésie. Je l'ai fait pendant une année, après j'ai démissionné et j'ai refait. Et actuellement je suis médecin spécialiste en médecine interne et diabétologie.

**Interviewer:** Et dans votre cursus, à quelle fréquence utilisez-vous des ressources en anglais dans votre pratique quotidienne ? Et est-ce que c'est nécessaire pour vous ?

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**Interviewee:** Bien sûr que c'est nécessaire. L'utilisation, sincèrement, c'était d'une façon plus ou moins moyenne. Et cela par manque de documentation en anglais dans les bibliothèques universitaires. Par ailleurs, notre génération a eu la chance d'accéder à cela par le biais des réseaux et notamment internet. J'ai eu l'occasion d'assister à peu de conférences en anglais durant ma modeste carrière. J'ai assisté à quelques webinaires en anglais et c'était très intéressant et enrichissant. Bien évidemment, la difficulté existe et cela par rapport à la compréhension de l'anglais médical qui reste spécifique et spécial si on compare cela à l'anglais qu'on a étudié dans notre enfance. A savoir que les termes médicaux sont un petit peu différents entre la langue française et l'anglais. Cela par rapport à la compréhension de la langue, notamment dans la difficulté de la rapidité de la prononciation pour certaines personnes qui sont anglophones et cela par rapport aussi à l'accent. Chaque pays a son accent, alors ce sera difficile de comprendre tous les accents. Surtout si l'interlocuteur n'a pas un haut niveau en anglais.

**Interviewer:** Face à ces barrières linguistiques, comment êtes-vous pour les surmonter et appliquer correctement les résultats de recherche ?

**Interviewee:** Pour le passé, on avait l'accès à des livres, à savoir les dictionnaires de traduction, notamment Larousse Médical. Et de nos jours, heureusement, on a l'accès aux réseaux, notamment Internet, l'intelligence artificielle. Donc de cela, on est un petit peu aidé, si j'ose dire, pour faire la traduction en temps réel et pour avoir une meilleure compréhension de l'anglais médical. Très bien.

**Interviewer:** Et pensez-vous que des formations ou des ressources spécifiques devraient être mises en place dans les hôpitaux et les institutions de recherche pour aider les professionnels de santé à mieux maîtriser l'anglais ?

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**Interviewee:** Sûrement, et cela par le biais des formations en anglais médical qui restent spécifiques et nécessaires pour le futur proche, à savoir que les actualités médicales sont toutes établies en langue anglaise. D'une part, il faut aussi favoriser les formations à l'étranger pour avoir un meilleur échange. Et aussi un contact avec l'étranger, avec d'autres cultures, d'autres... comment dirais-je... Professionnels de la santé... Oui, c'est ça.

**Interviewer:** Enfin, selon vous, en quoi une meilleure maîtrise de l'anglais par les médecins algériens pourrait-elle améliorer leur contribution à la recherche médicale et à la pratique au niveau international ?

**Interviewee:** Comme je l'ai dit précédemment, pour avoir accès à des nouveautés et être bien évidemment à la page de ce qui se passe en outre-mer, donc à l'étranger, et pour avoir un auto-développement d'une part et améliorer la prise en charge sur les hôpitaux d'une part et une meilleure prise en charge par rapport aux patients selon les standards mondiaux.

**Interviewer:** Merci, merci beaucoup pour votre réponse et votre temps. Ce fut un échange très enrichissant, mon ami.

**Interviewee:** J'ai eu le plaisir de partager cet échange avec plaisir. Merci beaucoup. Merci.

### **Appendix 9: Informant 3 interview English version**

**Interviewer:** Hello and welcome to this interview. Today, we will talk about the challenges faced by Algerian doctors educated in French when they attend conferences in English or when researching updated medical data in English. Thank you for accepting my invitation.

**Interviewee:** Hello, my friend, and it will be my pleasure. Thank you. To begin, can you tell me how long you've been practicing medicine? Well, I could say since my birth, if I dare say so, of

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course. It's a family legacy. I began my medical studies in 2006 and started my specialization in 2014.

**Interviewer:** And what specialty do you practice?

**Interviewee:** Initially, I was a resident in anesthesia and intensive care. I did that for one year, then I resigned and retrained. Currently, I am a specialist in internal medicine and diabetology.

**Interviewer:** And in your curriculum, how often do you use English-language resources in your daily practice? And is it necessary for you?

**Interviewee:** Of course, it's necessary. Honestly, the use was more or less moderate. This is due to a lack of English-language documentation in university libraries. Moreover, our generation was fortunate to access resources through networks, especially the internet. I had the chance to attend a few conferences in English during my modest career. I attended some webinars in English, and they were very interesting and enriching. Of course, the difficulty exists, particularly regarding the understanding of medical English, which is quite specific and special compared to the English we learned in our childhood. The medical terms are slightly different between French and English. This is related to understanding the language, especially with the difficulty of pronunciation speed for some English speakers, as well as the accent. Every country has its accent, so it will be hard to understand all accents, especially if the speaker doesn't have a high level of English.

**Interviewer:** In the face of these language barriers, how do you overcome them and apply research findings correctly?

**Interviewee:** In the past, we had access to books, including translation dictionaries, notably Larousse Medical. Nowadays, fortunately, we have access to networks, especially the internet

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and artificial intelligence. So, we're a bit helped, if I may say so, to translate in real-time and have a better understanding of medical English. Very good.

**Interviewer:** Do you think that specific training or resources should be put in place in hospitals and research institutions to help healthcare professionals improve their English?

**Interviewee:** Certainly, through medical English training, which remains specific and necessary for the near future, considering that all medical updates are published in English. On the one hand, it is also important to promote training abroad to foster better exchange and contact with foreign countries, other cultures, and... how should I say it... healthcare professionals... Yes, that's it.

**Interviewer:** Finally, in your opinion, how could a better command of English by Algerian doctors improve their contribution to medical research and practice at an international level?

**Interviewee:** As I said earlier, to access new knowledge and stay up-to-date with what is happening overseas, abroad, and to foster self-development, improve hospital care, and better patient care according to global standards.

**Interviewer:** Thank you, thank you very much for your response and your time. This was a very enriching exchange, my friend.

**Interviewee:** It was my pleasure to share this exchange. Thank you very much. Thank you.

## Summary

### Summary

This dissertation focuses on how language barriers hinder the participation of the Algerian doctors educated in French in English-language professional contexts such as medical conferences and accessing up-to-date medical research. It is directed to analyze and discuss the findings from both quantitative and qualitative approaches collected from 60 doctors' questionnaire answers supported by three interviews. This study is aimed to assess the English proficiency level among the Algerian doctors, and its impact on their participation in English-language settings, then identify the challenges they faced. In the end, it was intended to evaluate the effectiveness of the strategies employed by these doctors to overcome language barriers and propose recommendations to improve their English proficiency such as the reassessment of the language policies and provide a structured support for English language in the medical education, prioritize EMP and specialized training workshops in medical English.

**Key words:** Language barriers, English proficiency, language policies, EMP, English, French, Doctors, Medicine.

### ملخص

تركز هذه الأطروحة على كيفية تأثير الحواجز اللغوية على مشاركة الأطباء الجزائريين المتعلمين باللغة الفرنسية في السياقات المهنية باللغة الإنجليزية، مثل المؤتمرات الطبية والاطلاع على أحدث الأبحاث الطبية. وتهدف إلى تحليل ومناقشة النتائج المستخلصة من منهجين كميين ونوعيين، تم جمعها من إجابات 60 طبيباً على استبيانات، مدعومة بثلاث مقابلات. تهدف هذه الدراسة إلى تقييم مستوى إتقان اللغة الإنجليزية لدى الأطباء الجزائريين، وأثره على مشاركتهم في البيئات التي تستخدم اللغة الإنجليزية، ثم تحديد التحديات التي واجهوها. وفي النهاية، كان الهدف هو تقييم فعالية الاستراتيجيات التي استخدمها هؤلاء الأطباء للتغلب على الحواجز اللغوية، واقتراح توصيات لتحسين إتقانهم للغة الإنجليزية، مثل إعادة تقييم سياسات اللغة، وتوفير دعم منظم للغة الإنجليزية في التعليم الطبي، وإعطاء الأولوية للغة الإنجليزية للأغراض الطبية، وتنظيم ورش عمل تدريبية متخصصة في اللغة الإنجليزية الطبية.

**الكلمات المفتاحية:** الحواجز اللغوية، إتقان اللغة الإنجليزية، سياسات اللغة، اللغة الإنجليزية للأغراض الطبية، الإنجليزية ، الفرنسية ، طبيب ، الطب.

## Summary

### **Résumé**

Cette thèse porte sur la manière dont les barrières linguistiques entravent la participation des médecins algériens formés en français à des contextes professionnels anglophones tels que les congrès médicaux et l'accès à la recherche médicale la plus récente. Elle vise à analyser et à discuter les résultats des approches quantitatives et qualitatives recueillies à partir des réponses à un questionnaire de 60 médecins, appuyées par trois entretiens. Cette étude vise à évaluer le niveau de compétence en anglais des médecins algériens et son impact sur leur participation aux contextes anglophones, puis à identifier les défis auxquels ils sont confrontés. Enfin, l'objectif était d'évaluer l'efficacité des stratégies employées par ces médecins pour surmonter les barrières linguistiques et de proposer des recommandations pour améliorer leur maîtrise de l'anglais, telles que la réévaluation des politiques linguistiques, la mise en place d'un soutien structuré à l'anglais dans la formation médicale, la priorisation d'Anglais à des fins médicales (EMP) et des ateliers de formation spécialisée en anglais médical.

**Mots clés :** barrières linguistiques, maîtrise de l'anglais, politiques linguistiques, EMP, Anglais, Français, Docteur, Médecine.