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Stress Management for Medical Interpreters

Case Study: The Algerian-Cuban Eye Hospital of Ouargla

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Dedication

"No duty is more urgent than giving thanks." James Allen

This thesis is dedicated to

The love of my life, the sunshine of my world, the happiness of my heart,
My mother

The source of support in my life, the one who sacrificed to see me succeed,
My father

Beloved sisters and brother, Rania & Loubna & Farouk, and dearest
grandfather, for their endless love and encouragement

And to my precious grandmother's soul

My heart is overflowing with gratitude. Thanks from the bottom of my heart

→ Forever, Always, Mine, I Love You ←

Soumia

Dedication

To my first teacher , my greater supporter and my ever lasting lover
To the greatest men in my eyes......My Father.

To the source of love and tenderness to the candle that illuminate my life to
the most wonderful women..... My Mother.

To my life partner, my soulmat and my everlasting supporter
to my beloved......My Husband.

To the bond which I derive my strength, to the source of my happiness and
pleasur to my dear Brothers (Abdennour and Abdelhamid) and My lovely
sister (Romaissa)

To all those whom I carry love for them
my husband's family , My relatives, and all my friends

I dedicate this work

Douaa

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"We must find time to stop and thank people who make difference in our lives" John F. Kennedy

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Abstract

The last decades have been marked by an increasing interest regarding the process of interpretation, which experts in the field consider to be a demanding undertaking that requires a set of skills and competencies. The concept of stress poses significant challenges in the medical interpreting setting with regard to the physical and mental well-being of medical interpreters, as well as their efficiency in performing duties. The multitude of stressors and the lack of ability to effectively manage them contribute to elevated levels of cortisol and adrenaline, the stress hormones. Additionally, the uncertainty associated with making critical decisions in emergency situations further impacts the quality of their work. Consequently, it is recommended that implementing effective stress management strategies as a mode of resolving problems be prioritised. Within this field of inquiry, the present study has explored several complexities that contribute to the development of mental health disorders and their consequences, and it has scrutinised the conundrum of how medical interpreters can effectively handle stress stemming from their professional duties. In accordance with the research objectives, a survey was submitted to four medical interpreters employed at the Algerian-Cuban Eye Hospital located in Ouargla. The re-search results demonstrate that medical interpreters in fact encounter a range of stressors that differ in respect of reactions from one individual to another, and that the development of certain personal and organizational strategies for coping with stress, like relaxation techniques, training programmes, and vacations, play a prominent role in optimising their performances and competencies.

Key words: Medical interpreting, occupational stress, stress management, medical setting, Algerian-Cuban Eye Hospital of Ouargla.

الملخص

حظيت عملية الترجمة الشفوية باهتمام كبير في العقود الأخيرة، ويعدّها الخبراء في المجال مهمة صعبة تتطلب مجموعة من المهارات والكفاءات. يطرح مفهوم التوتر في مجال الترجمة الطبية تحديات كبيرة للسلامة الجسدية والذهنية للتراجمة، فضلاً عن الفعالية في أداء مهامهم. يمكن أن يؤدي تعدد مسببات التوتر وعدم القدرة على إدارتها بشكل فعال إلى ارتفاع مستويات هرمونات التوتر (الكورتيزول والأدرينالين). فضلًا على ذلك، فإن عدم اليقين في اتخاذ القرارات المناسبة في المواقف الحرجة يؤثر بشكل أكبر على جودة عملهم. لذلك، يوصى بتبني استراتيجيات فعالة للتعامل مع ضغوط العمل. تسعى هذه الدراسة إلى الكشف عن مصادر التوتر الذي يواجه التراجمة الطبيين وكذا دراسة معضلة التعامل مع التوتر الناجم عن واجباتهم المهنية. وبهدف بلوغ الغاية المرجوة من هذا العمل، تم البحث مليا في هذا الصدد باستعمال مصادر موثوقة، وكذا إجراء دراسة استقصائية بالاستعانة باستبيان لجمع البيانات، تم تقديمه لأربعة تراجمة طبيين عاملين بالمؤسسة الاستشفائية لطب العيون صداقة "الجزائر كوبا" بورقلة. كشفت نتائج البحث أن التراجمة الطبيين يواجهون مجموعة من العوامل التي تساهم في احداث التوتر والتي تختلف حسب استجابات الأفراد، كما ان تطوير استراتيجيات شخصية وتنظيمية، مثل تقنيات الاسترخاء وبرامج التدريب والإجازات، يلعب دورا بارزا في الحد من ضغط العمل وبالتالي تحسين اداءهم وكفاءتهم.

الكلمات المفتاحية: الترجمة الشفوية الطبية، الضغط المهني، التحكم في التوتر، المجال الطبي، المؤسسة الاستشفائية لطب العيون صداقة "الجزائر - كوبا" بورقلة.

Résumé

Les dernières décennies ont été caractérisées par un intérêt croissant pour le processus d'interprétation, que les experts du domaine considèrent une profession exigeante nécessitant des aptitudes et des compétences différentes. Le concept de stress pose des défis majeurs dans le contexte de l'interprétation médicale en termes de la santé physique et mentale des interprètes médicaux, ainsi que leur efficacité dans l'exécution de leurs fonctions. La diversité des facteurs de stress et l'incapacité à les gérer efficacement contribuent à augmenter les niveaux des hormones du stress, le cortisol et l'adrénaline. De plus, l'incertitude associée à la prise de décisions critiques en cas d'urgence a un impact supplémentaire sur la qualité du travail. Par conséquent, il est recommandé de prioriser la mise en œuvre de stratégies efficaces de gestion du stress comme moyen de résolution des problèmes. Dans ce domaine de recherche, cette étude examine certaines des complexités et leurs implications qui contribuent à l'émergence de troubles mentaux, et explore le dilemme de savoir comment les interprètes médicaux peuvent gérer efficacement le stress découlant de leurs tâches professionnelles. Conformément aux objectifs de la recherche, un groupe de quatre interprètes médicaux travaillant à l'hôpital ophtalmologique Cubain-Algérien d'Ouargla a été interrogé à l'aide d'un questionnaire. Les résultats de la recherche ont montré que les interprètes médicaux sont en fait exposés à une variété de facteurs de stress qui diffèrent en termes des réactions d'un individu à l'autre, et que l'élaboration des certaines personnelles et organisationnelles stratégies pour l'adaptation du stress, telles que les techniques de relaxation et les programmes de formation et les vacances, peuvent améliorer les performances et augmenter les compétences des interprètes.

Mots clés : Interprétation médicale, stress, gestion du stress, contexte médical, Hôpital Ophtalmologique amitié Algérie - Cuba – OUARGLA.

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List of Abbreviations:

- **AIIC:** International Association of Conference Interpreters.
- **AIS:** American Institute of Stress.
- **APA:** American Psychological Association.
- **AUSIT:** Australian Institute of Interpreters and Translators.
- **CBT:** Cognitive-Behavioural Therapy.
- **CCHI:** Commission for Certified Healthcare Interpreters.
- **CHIA:** California Healthcare Interpreting Association.
- **D-Cs:** Demand Control Schema.
- **GI:** Guided Imagery.
- **ISO:** International Organization for Standardization.
- **MBSR:** Mindfulness-based stress reduction program.
- **MITS:** Medical Interpreting Training School.
- **NAATI:** National Accreditation Authority for Translators and Interpreters.
- **NBCMI:** National Board of Certified Medical Interpreters.
- **NCP:** National Center for Health Promotion and Disease Prevention.
- **OSHA:** Occupational Safety and Health Administration.
- **PMR:** Progressive muscle relaxation.
- **TRICC:** Training Intercultural and Bilingual Competencies in Health and Social Care.

Introduction

Introduction

Interpreting is the process of conveying the meaning of oral speech from one language to another, using different forms (face-to-face, telephone or video link), with paying attention to be delivered effectively.

The increasing level of immigrant and refugee populations worldwide has led to a growing need for interpreters as assistants in delivering communicative public services due to linguistic and cultural differences. As a result, rising demands for community based-setting interpreting profession globally. As cited in Şener and Kıncal (2019), according to the earliest EU-Grundtvig project named Training Intercultural and Bilingual Competencies in Health and Social Care (TRICC, 2011), language is one of the biggest barriers in doctor-patient communication.

The best way to break down language barriers is to use interpreters because useful communication is of paramount significance, as it enlightens the openness for other societies and cultures particularly in medical setting to ease the interaction between the patient and healthcare providers who do not speak the same language. Well qualified and experienced interpreters in the domain help in the production of accurate satisfactory message that affects the patient health outcomes.

Interpreting is known to be a stressful activity (Korpal, 2016) that leads interpreters suffer psychologically, physically and physiologically due to little control and many demands that differ according to situation conditions. Although stress phenomenon mostly depends on the different characteristics of the individuals, many studies investigated the influence of work conditions in putting mediators under this mental health issue. The National Institute for Occupational Safety and Health (NIOSH, 1999) stated that "working conditions play a primary role in causing job stress" (p. 8). Therefore, decline productivity and low mediation quality.

The American Institute of Stress (AIS) stated that stress is "a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize". Interpreting in medical setting considered a quiet stressful complex task that attracted the attention of lots of interpreting scholars (e.g. Chiang 2009, 2010). The decisions-making that interpreters adopt while experiencing onslaught stress can impact the patient's therapy outcome negatively because it is a matter of life or death (Ng & Crezee, 2020). One from the major scholars was the Associate Professor at Auckland University of

Technology, Ineke Crezee, who practiced healthcare interpreting and translating and assisted in developing the first medical interpreting courses in New Zealand in the early 1990s (ibid).

In short, unmanageable stress for medical interpreters can cause work-life imbalance, which affects their health (physically and mentally) and interpretation quality, hence threats the patient safety. No interpreter is immune to stress, thus, the ability of coping stressful situations and being stress literate is crucial to ensure stress prevention.

Literature review

The significance of such a topic is that it has been the focus of many interpreting scholars who have tried to investigate the role and importance of using interpreters in bilingual communication in healthcare settings. Elaine Hsieh is a professor and chair of the department of Communication at the University of Minnesota. Her research interests focus on interpreters' influence on the quality of health care services. She has several books and articles that tackle this topic, such as "Understanding Medical Interpreters: Reconceptualizing Bilingual Health Communication" (2006), "Provider-Interpreter Collaboration in Bilingual Health Care: Competitions of Control over Interpreter-Mediated Interactions" (2009), "Reducing Health Disparities" (2013), and "Bilingual Health Communication: Working with Interpreters in Cross-Cultural Care" (2016). Metzgreser et al., (2007) conducted a study titled "Providing high-quality care for Limited English Proficient patients: The importance of language concordance and interpreter use", on 2746 Asian-American patients to identify the importance of language concordance between patient and provider and the use of interpreters to provide high-quality care for limited English proficient patients.

"Interpreters' experience of distress in paediatric medical encounters" is a study that has shown that medical interpreting is a stressful job. It was conducted by the team of psychology PhD student Paulina Clarify, in which they interviewed 13 Spanish-to-English paediatric medical interpreters from children's hospitals in Wisconsin. The team asked the participant a series of questions related to their work, stress, and coping techniques. They conclude that dealing with abuse or end-of-life care may be a challenge or source of stress for medical interpreters. Many other studies that treated interpreting activity from a psychological point of view and tried to investigate the factor and the effect of stress during the interpretation process, such as "Physiological stress during simultaneous interpreting: A comparison of experts and novices" (Kurz, 2003), "Interpreter behaviour" (Horváth, 2012), "Interpreting as a stressful activity: Physiological measures of stress in simultaneous interpreting" (Korpal, 2016),

Statement of the problem

Language mediation is a fundamental communicative activity to transfer meaning and facilitate effective interaction between people with different sociocultural and linguistic backgrounds. Thus, the need for interpreters in such cases is undeniable. Interpreting is a high-demanding job that entails much effort for language services. For that reason, many issues arise during the interpreting activity, whether the interpreting is done for medical, veterinary, literary, administrative, or legal purposes, for novice or professional interpreters, despite their experiences. One of these major issues is stress. Dealing with stress, which is a fact of life, during the interpretation process is a real problem, especially in a medical setting, because the risks associated with poor communication can greatly affect the patient's health outcomes.

Aim of the study

The main purpose of this study is to shed light on the reality of interpreting in healthcare institutions to provide a direct and exact description of the stress challenges that the medical interpreters may encounter, in addition to investigate the role of stress management in shaping medical interpreting when the interpreters feel under pressure in stressful situations.

Research Questions

Main research question

- How could medical interpreters manage their stress and continue performing at their absolute best?

Sub-questions

- What are the sources of stress that may affect the performance of the medical interpreters?
- To what extent could stress management influence medical interpreters?

Hypotheses

It is hypothesised that:

- Environmental (workplace), physiological, and psychological issues can be the reasons for feeling stressed during the interpreting process.
- Stress management is a very efficient procedure that improves mental health, performance, and resilience under pressure.

Methodology

To achieve the research goals and increase its validity and reliability, a mixed method of qualitative and quantitative methods, including explanatory and quasi-experimental designs, is adopted to answer the problematic question of how medical interpreters can manage stress. The researchers conducted a survey in order to investigate the problems of stress in a real-world context through a questionnaire submitted to the interpreters of the Algerian-Cuban Eye Hospital of Ouargla. Purposive sampling was carried out to select the participants.

The survey uses a combination of 31 open-ended and closed-response questions as well as a Likert-type rating scale to gather information about the working conditions of interpreters. The target population: Medical interpreters of the Algerian-Cuban Eye Hospital of Ouargla.

Research Structure

The present research is divided into three chapters. The first and second chapters are theoretical, while the third is practical.

The first chapter includes community interpreting, healthcare interpreting, its historical background and significance as a profession, the role of medical interpreters, and the frequently applied modes of interpreting in the field. In addition to the training of medical interpreters and the common challenges that they may encounter.

The second chapter sheds light on interpreting as a stressful activity in the medical context. Starting by defining stress, occupational stress, and its impact on the interpreting process generally and precisely in healthcare settings, as well as discussing types of stress and elucidating its causes and consequences among medical interpreters. Then, providing the appropriate techniques to cope with and manage stressful interpreting situations, in addition to the role of technological support.

The chapter of the practical part is devoted to describing the recruited participants, the used methodology for data collection, the implemented instruments to analyse the data, and to analysing the findings with discussion. This part is followed by a general conclusion.

Limitations

The present research study carries notable limitations within which the obtained results cannot be generalised and applied from the targeted group of medical interpreters to an entire population because of the small size of the representative population. In addition to time constraints and the lack of references and previous studies on the topic. Regarding the topic of stress management, particularly in medical interpreting, the current work is considered the first one at the University of Kasdi Merbah Ouargla.

Theoretical Part

CHAPTER. I
Medical Interpreting

Introduction

This chapter has provided an overview about medical interpreting as a modern occupation which has proven its necessary in recent years, the starting point will be a representation of the concept community interpreting than shedding the light on interpreting practices inside health care institutions, followed by an overview on the history of interpreting in general and medical interpreting in specific. In addition to an investigation to the importance in connection with the role of medical interpreter will be presented, through exposing numerous studies that examined the role of medical interpreting in different medical institutions. Lastly presenting the various mode of interpretation activity and the challenges that the interpreter may encounter in his job as a linguistic and cultural mediator.

I. 1. Community Interpreting

The growing number of multiculturalism and multilingualism immigrants, refugees, asylum seekers, and tourists universally raises the demands for professional community interpreting in many countries as an integral way to bridge and improve a smooth mutual communication between individual newcomers having limited resident language proficiency and service providers in public service areas like prisons, schools, and hospitals in given societies due to the variety of settings.

According to the Healthcare Interpretation Network (HIN, 2007), community interpreting is "bidirectional interpreting that takes place in the course of communication among speakers of different languages. The context is the provision of public services such as healthcare or community services in settings such as government agencies, community contexts, legal settings, educational institutions, and social services" (p. 10).

It took place first in the 1970s in Australia, in Sweden in the 1980s, then in Western Europe (New Zealand), the US, and Canada around the 1990s, where a lot of standard community interpreting training agencies have been established in an attempt to describe the professional community interpreters roles in such situations, including (AUSIT) Institutes of Interpreters and Translators in Australia and (CHIA) California Healthcare Interpreting in the US (Mahdavi, 2020), because each setting entails mastering an accurate mode of delivery according to the requirements of the interpreted event (Gambier & Doorslaer, 2010).

Nowadays, it spreads in many nations, and different terms have been coined to de-scribe it as: public service interpreting in the UK, cultural interpreting in Canada, dialogue interpreting, institutional interpreting, liaison interpreting, and ad hoc interpreting, as it is considered an integral way to improve the delivery of needed public services in complex contextual conversations for foreigners with limited language proficiency (HIN, 2007).

I.2. Medical interpreting

Healthcare interpreting is a distinctive field of interpretation that affects the patient-providers communication due to multilinguistic and sociocultural differences, and assists in providing access to high-quality healthcare services at hospitals, clinics, doc-tors' offices, among other healthcare settings. It also takes place in different specialist of healthcare areas as neuropsychology, speech pathology, oncology and dentistry.

Practitioners in the setting are often known as medical interpreters. They are professional, trained, qualified and competent interpreters acquiring a set of required sufficient knowledge of medical terminologies and register, to function without any distortion rather than ad hoc interpreters.

Interpretation in healthcare is extremely complex activity. Medical interpreters need to work for accurate faithful rendition of the message content and spirit to guarantee patient right diagnosis, treatment and well-being. As interpreters "assignments may range from routine consultations with physician to emergency procedures, childbirth, or complex laboratory testing" (Jagielski, 2016, p.55).

Successful healthcare interpreting has to maintain detailed description of the patient expressions of pain and symptoms, in addition to explanation of medical regimes for best consultation.

I.3. The history of medical interpreting

Due to the ephemerally of speech, there are much fewer records related to interpreting activity in historical events, compared to translation which depends on written texts. However, the significant firsthand achieve to some traces related to the interpreters and interpreting activity had found in the Japanese monk Ennin's (794-864) diary documenting his decade-long (838-

847) China sojourn, contains of thirty-eight references to Sillan interpreters (Lung, 2016) whose played a great role in East Asian Exchanges.

Another significant practice of interpreting activity was during the decade (1492-1504) when Christopher Columbus was planning to reach Japan and China through-out the period of discovering the new world (America). He used an interpreter named by Luis de Torres, who was fluent in Spanish, Hebrew, Chaldean, Arabic and few Latins, to interpret sightly some official documents were written in Latin to exchange with Chinese and Japanese authorities as Columbus was assumed, however Luis de Torres failed in his first attempt to communicate with Taino peoples on Hispaniola Island (Alonso, 2016).

The interpreters had a great role in the exploration of Portuguese along the West African coasts, including their cooperation in the kidnapping natives, even captives were using as interpreters during the early Spanish voyage of discovery to the Americas (ibid).

Recently, due to the current geopolitical situation, the number of immigrants has increased overall the world, which led to an increasing in the number of linguistic minorities who are not fluent in the spoken language of that country. if we take the USA as an example as cited in (Hsieh, 2013), in 1990 nearly 31.8 million Americans spoke a language other than English at home, among which 13.9 million (6.6% of the population) have limited English proficiency (LEP). In 2007, the number became 55.4 and 24.5 million (8.7% of the population) respectively (Shine & Kominski, 2010).

According to Davidson (2000) "medical interviews are thus a type of verbal and physical investigation between the physician and the patient designed to quickly elicit the patient's complaint so that may be diagnosed and treated" (p. 383). Medical encounter has been the centre of numerous studies which focused primarily on the difficulties of effective communication between patients and physician in connection to the role played by the interpreter.

The problem of language barriers in health care setting has been the centre of interpreting studies and researches such as: Elaine Hsieh which consider as one of the pillars of medical interpreting researches, her studies that treat the issues of bilingual communication in the healthcare context contribute to enrich the field and serve both researchers and interpreters. Her research interests focus on: The interpreters' influence on the quality of health care services and the interpreter's communicational rule. Her major publications: Understanding Medical Interpreters: Reconceptualising Bi-lingual health communication (2006), Reducing Health Disparities (2013), Bilingual Health Communication: Working with interpreters in cross-cultural care (2016).

I.4. The importance of medical interpreter

Language barriers have been found to negatively affect the quality of medical ser-vices with more medical errors and unsatisfied patient (David, 2007). There became a wide recognition of the need to provide a linguistic assistance, especially in health care services, to help patients and providers who do not speak the same language to achieve a successful medical encounter with no misunderstanding nor language or cultural barriers. A study found that there 11% of patients in 83 public and private hospitals required the service of a linguistic assistant (Ginsberg et al., 1995), so as a result the need for an interpreter has become a fact of contemporary medical practice (Davidson, 2000). So, language mediation is a fundamental communicative activity to transfer the meaning and unable effective interaction between people having different linguistic and cultural differences, the need of interpreter in such cases is un-deniable, especially in medical setting due to several causes.

The old practice of using one of the relatives of the patients or one of the medical staff to interpret for the parts of the medical encounter can be a dangerous issue (Tebble, 1998) because there is no guarantee that all what the doctor or the patient said have been interpreted or, if it is, have it interpreted accurately, fully, or in confidence? So, knowing the language does not authorize anybody to serve as an interpreter, since interpreting is a complex activity that requires high communicative skills and solid knowledge of medical terms. Healthcare domain is a sensitive area because dealing with people lives is not something that can be neglected and any trouble in communication process between patient and provider can highly affect the patient outcomes.

The main aim of every medical institution is providing a high quality of health care and obtaining satisfactory results for its patient, especially in the case of language differences between patient and physician as language barriers can be a great challenge; This purpose can be achieved when communication effectiveness gets actualized through hiring qualified interpreters.

I.5. The role of medical interpreter

Numerous studies tried to investigate the role of medical interpreter in bilingual communication and present concrete results of surveys done in some medical institutions.

Metzgreser et al. (2007) surveyed 2746 Asian-American patients to examine the importance of language concordance between patient and provider in connection to the use of interpreter to

provide high quality care for limited English proficient (LEP) patients. The survey found that patients with language-discordant providers receiving less health education and less satisfaction from the client compared to those with language-concordant provider, while it reported better health education and more satisfied clients in language-concordant visits with the assistant of clinic interpreter than without his assistant.

In Tocher and Larson's comparative study (1998) in some medical institutions about the quality of diabetes care for non-English-speaking they found that the quality of diabetes care for interpreted patient is as good as, if not better than, for English-speaking patient which means that the interpreter has bridged the linguistic and cultural gap that have been always a great challenge for both patient and provider.

In the other hand, some researchers found opposite outcomes which show that the results of providing interpreter services were not all positive, for example there was less communication with physicians for patients who have received interpreter ser-vice, they likely receive less facilitation, and have more ignored comments from their physicians (ibid).

I.1.1. Types of the medical interpreter roles

A typology has been proposed by Jalebret in (1998) as it cited in (Leanze, 2003) to understand the diverse roles played by the interpreter.

•**Translator:** in this role, the interpreter simplifies the communication process and minimises his presence as much as possible.

•**Cultural Informant:** the interpreter uses his prior cultural knowledge to help the provider to better understand the patient.

•**Cultural Broker or Cultural Mediator:** the interpreter provides enlarge explanations on the utterance of both provider and patient to help achieving at meaningful shared model.

•**Advocate:** when the interpreter acts as defender of one of the parties if the situation was value-conflict, as Davidson stated in his study, "interpreters are acting as 'advocate' or 'ambassador' for interpreted patient."

•**Bilingual Professional:** the interpreter reported the patient's speech to the provider language and vice versa. He is able to do this in a professional manner because of his experience and prior training in health care setting.

Both patient and provider confront challenges in seeking and providing information in health care setting due to the differences in their social and conventional norms, and cultural

expectations (Hsieh, 2013) which disrupt the communication process. In this case, both sides are highly in need of the assistance of the interpreter to provide them awareness in the relevant context. Leanza (2003) stated: "Indeed, interpreters in this setting have many roles beyond being 'translation machines' they can facilitate intercultural communication" (p. 168). Interpreters are assistants in establishing an effective communication between patient and provider by making what is implicit, explicit.

The active role played by the interpreter through his participation in communication activity made the researcher note his affective involvement during the medical encounter, and they questioned the interpreter's ethics and his possible infringement on the provider's authority or patients' autonomy (Hsieh, 2010).

Leanza (2003) tried to examine the role of the interpreter and his experience of working in cultural differences in a paediatric setting for French speaking in Switzerland from the perspective of a physician and the interpreters themselves:

The view of the physician: The doctors go in two ways. In the first trend, the physician felt a loss of control of time, and exclusion from the interaction with parents, while the second trend saw that the interpreter plays the role of cultural informant which helps them to modify their representation of child-rearing, in addition to his role outside the consultation rooms as a supporter for the families.

The view of the interpreters: The interpreters identified two roles. The first is to welcome the patient to the hospital and give him confidence in this unfamiliar environment by navigating with him. The second role is to support families outside the consultation rooms, as mentioned by some physicians.
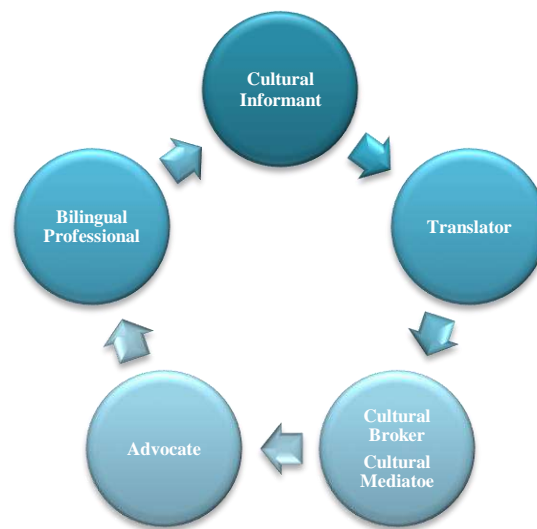
Figure 01: The roles of medical interpreters according to Jalebret (1998)

I.6. Modes of Medical interpreting

There are various interpreting modes in medical setting. Applying the appropriate mode in delivering the message depends on circumstances, situation, recommended case and parties involved in the conversation.

I.6.1. Consecutive interpreting

Consecutive interpreting is the most used mode in healthcare setting, notably in dialogue-interview consultations. That is, during an interaction between patient and service provider one part speaks, and then the interpreter transmits what said to the target language in chunks. Long consecutive interpretation may require taking notes.

I.6.2. Simultaneous interpreting

Simultaneous interpreting mode is the immediate continuous rendering of the speech in patient-physician conversation from one language to another without additions or omissions. It usually occurs in mental health situations and emergent cases. Simultaneous delivering mode recommends extreme concentration because missing any information may threats the patient health.

I.6.3. Sight translation

Sight translation in medical setting used in the process of transferring simple written clinical documents as consent forms, physician instructions and certifications into oral form. Typically, doctors, nurses and healthcare staff give the interpreter the source material to be read before producing the target material.

I.6.4. Remote interpreting

Medical interpreting process can be provided remotely as an option in case the in-person interpretation is unavailable. It is characterized by the physical absence of the interpreter, patient and healthcare provider in the same location. Moser-Mercer (2003) defines remote interpreting as "any form of simultaneous interpreting where the interpreter works away from the meeting room either through a video-conferencing set-up or through a cabled arrangement close to the meeting facilities, either in the same building or at a neighbouring location" (p.1). The major used types of remote interpreting for message rendition in medicine are telephone and video interpreting.

I.6.4.1. Telephone interpreting

Telephone interpreting is the auditory production of the interpreted output via tele-phone. It is mostly used in cases of rare language, pharmacy refill and routine return visits.

I.6.4.2. Video interpreting

Video interpreting considers a useful mode of interpreting that is imposed by the technological development. It guarantees both the visual and auditory rendering of the message of the patient-physician communication from the first language to the second one as if they are in the same place. It usually used in sign language, surgeries and rehab therapies.

Figure 2: In-person interpreting

(Global Voice, n.d.)

Figure 3: Sight interpreting

(EthnoMed, 2016)

Figure 4: Telephone interpreting

(Newnum, n.d.)

Figure 5: Video interpreting

(Frederick Interpreting, 2020)

I.7. Training of medical interpreters

The increased demands on public service interpreting (community interpreting) and health care interpreting in particular have led some countries to release that professionalising and institutionalising medical interpreters are requisites, through providing sufficient training and certification measures for interpreters, in order to assure the quality of medical interpreting (Ertl & Pöllabauer, 2010).

I.7.1. Types of training for medical interpreters

I.7.1.1. Academic training (university or college)

Universities often offer training programmes during undergraduate or postgraduate studies as a part of their continuing education programmes. In Australia, both graduate and under-graduate training programmes in community interpreting are available at Deakin University (ibid.). This training programme is held by the National Accreditation Authority for Translators and Interpreters (NAATI), which offers different certification tests such as: certified specialist health interpreter, certified conference interpreter, and certified specialist legal interpreter.

In Algeria, universities provide training programmes for translation and interpreting students during the undergraduate period that involve a series of theoretical lessons that enrich the students' knowledge about the field, in addition to practical activities that assist in developing their communication skills. However, the practical activities in the Algerian academic institution are still limited and poor (Mechtaoi & Melahi, 2016).

I.7.1.2. Non-academic training

Due to the limitations of available training programmes in academic institutions, some interpreters enrol in training courses organised by non-academic institutions in order to reinforce their interpreting competences and increase their chances of employment.
Interpreters sometimes receive training courses at the institutions where they work, such as hospitals in the case of medical interpreters (Ertl & Pöllabauer, 2010).

I.7.1.3. Distance (online) training

Many websites provide online training courses in medical interpreting, such as MITS (Medical Interpreting Training School), which offers intensive 40-hour courses and continuing education for interpreters of all languages and in various disciplines of medicine (interpreting in cardiology, interpreting in orthopaedics, among others) with an international certification for practising medical interpretation. Moreover, ALTA is also a virtual platform that offers video-based lessons for medical interpreters and preparations for the CCHI (Commission for Certified Healthcare Interpreters) and NBCMI (National Board of Certified Medical Interpreters) exams, which are considered the major medical interpreter accreditation exams in the USA. The

interpreter who successfully passes one of these two national exams will be certified as a medical / health care interpreter.

I.8. Challenges of medical interpreters

During medical interpretation act, the mediator may face endless dilemmas that affect his accredited role due to different sensitive reasons vary from one interpreter to another. The difficulties can be in terms of achieving the basic standards produced by the National Code of Ethics for Interpreters in Health Care at a complete level regarding impartiality, confidentiality, accuracy, respect, professionalism and cultural awareness. Moreover, the task of fulfilling the sub skills of fluency, concentration, readiness, active listening, enough transparency and boundaries respect, in addition to work conditions can create a great distress among healthcare interpreters. Another challenge could be maintaining self-care, since the personal health of the interpreter is frequently under threat due to exposing to harmful contagious diseases (Corona viruses, Measles). Thus, in healthcare settings, interpreters must stick to protective practices by using universal precautions (Swabey & Dutton, 2014).

Sometimes healthcare providers and patients may disregard the importance of an interpreter, especially when the healthcare professional speaks unclearly or too fast which can make interpretation more challenging (Magill, 2017), and cause the interpreter to experience a fight or flight response.

Conclusion

To summarize, medical interpreting has imposed its necessity in recent years as a needful occupation due to the social, cultural and linguistic differences resulting from the openness to the world, which has raised the demands for using linguistic assistant in health care institutions. Nonetheless, interpreting studies are oriented to the investigation of the interpreter involvement in the health care framework and probing the challenges that he may encounter.

CHAPTER. II

Stress in medical interpreting

Introduction

The concept of stress has been discussed in several fields, such as medicine, psychology, and pedagogy. In this research, stress is the key issue. The present chapter exposes the concepts of stress and occupational stress, and presents subsequently a theoretical overview of stress in interpreting in general, then among medical interpreters in particular. In addition to clarifying the types of stress encountered in medical interpretation and discussing its causes and consequences on different levels. Lastly, in order to provide solutions for this serious issue, a number of techniques and strategies have been introduced to managing stress.

II.1. Stress

The term stress is a fact of life that can be simply described as a person's reaction to changes or demands in his life. It can be either negative life events such as job loss or a cancer diagnosis causing a negative form of stress called "distress", or even positive life events, such as getting married, changing jobs, or having a baby. This type of stress is known as "eustress" or positive stress.

Some scholars and psychiatrists tried to adjust the concept of stress, and they distinguished in two approaches: the physical approach developed by Hanes Selye (1940) and the transactional model approach developed by Lazarus and Folkman (1984). Selye (1976) defines stress as "the state manifested by the specific syndrome which consists of all the non-specifically induced changes within a biologic system" (p.16). In this approach, stress is treated as a physical reaction to a certain alarm. As it cited in (Korpal, 2016), Lazarus and Folkman define stress as "a particular relation-ship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (1984, p.19). In this model, stress is conceptualized as a transaction between the characteristics of the object (situation or event) and individual's coping resources.

Conducted studies have revealed that a numerous health problems are associated with stress, while the American Institute of Stress (AIS) reported that 75-90% of visits to primary care physicians are for stress related issues (Burns, 2010).

II.2. Occupational stress

The supreme task of workers or employees is to perform their job duties properly, while the essential responsibility of companies and institutions is to provide suitable work conditions for their employees for the best job performance. The absence of acceptable work conditions may lead to a hazardous problem named occupational stress, which refers to one of the major issues in the modern workplace. It has become the predominant topic recently due to its far-reaching effect on employees' behaviours and satisfaction with work conditions, in addition to causing low-quality work.

At the American Psychological Association (APA) Conference in 1995, Joseph Dear, Assistant Secretary of Labour for Occupational Safety and Health Administration (OSHA), stated:

> *"The workplace has been identified as the greatest single source of stress. The causes of such stress can range from the anxieties produced by corporate downsizing to factors that result in physical disorders such as carpal tunnel syndrome. Stress also can result from simply a feeling on the part of the individual worker that he or she is not appreciated on the job"* (Bower, 2015, p. 2).

Occupational stress can be defined as "the harmful physical and emotional responses that occur when the demands of the job exceed the capabilities, need or resources of the work" (Kurz, 2003). Work became the most common source of stress; 61% of surveyed adults stated that work was the source of stress, and in 2007, it was reported that 52% of employees said that stress is the decisive reason for which they make decisions related to their careers, such as leaving a job, looking for a new one, or declining a promotion (Jackson & Frame, 2018). Environmental aspects cannot always be the single source of occupational stress, since individual differences such as personality and coping style are important to predict whether the job conditions are stressful or not (Kurz, 2003). Job stress can also be caused by psychological and physiological aspects or the nature of the work itself.

In work, the encountered stress can be acute or chronic. Also known as short-term and long-term stress. Acute stress has an instantaneous effect on the body and emotions and temporarily impacts job performance. It prepares the body for the "fight or flight" response. In this case, clear thinking and new information processing become more difficult. Permanent acute stress turns into chronic stress, which is more dangerous because it could induce long-term damage

to the physical and physiological state and professional career. Chronic stress can be defined as "continued stress over a long period of time that is the most detrimental to our long-term health and well-being" (Burns, 2010, p. 26).

Occupational stress has become a real challenge for the employee because of the undesirable consequences that it may have for both novices and professionals, like low productivity, increased absenteeism, alcoholism, drug abuse, hypertension, and cardiovascular issues (Meneze, 2005).

II.2.1. Theories of occupational stress

Three common theories of occupational stress have been mentioned by Koval (2016):

II.2.1.1. The person-environment (Fit theory)

Stress occurs from the dissonance between person and environment, when the employee feels that the environment does not meet his needs and desires, such as job requirements, role expectations, regulations and norms.

II.2.1.2. The framework of occupational stress

The causative factors of occupational stress have what is called the snowball effect, which is a negative feeling associated with the job environment that may increase the risk of acute stress in addition to psychological and physiological damages.

II.2.1.3. The Demand-Control-Support Model

Job demands and job control are the main elements of work content. The great level of occupational stress would occur when there are high demands, very low control and strong strain level.
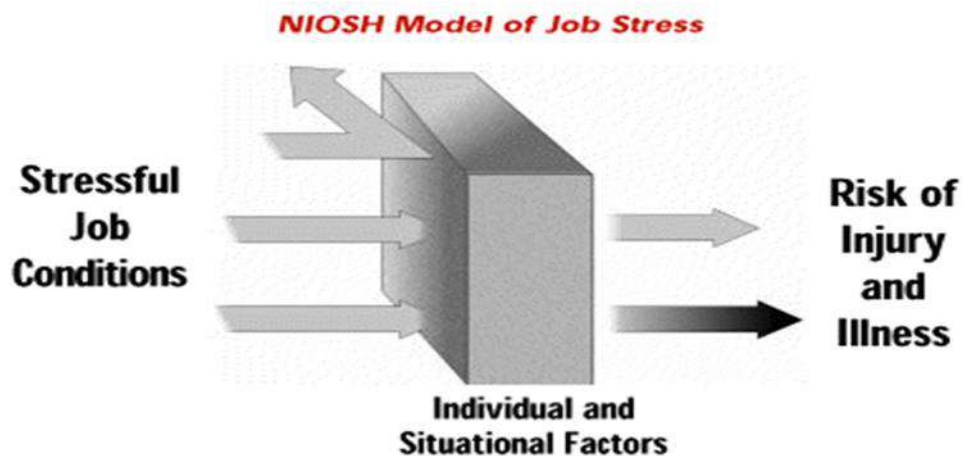
Figure 7: NIOSH Model of Job Stress (Kurz, 2003)

II.3. Stress in interpreting

The interpreting activity requires a high level of attention and maximum concentration over a long period of time, in addition to the ability of coping to different sub-jects, speakers, and accents, and the possibility of making mistakes or failure at anytime (kurz, 2003). All these factors are considered intrinsic contributors to stress. The late 20th century was described by a cognitive turn in interpreting research and the appearance of process-oriented research in interpreting studies. It had also witnessed a scholarly interest concerning the relationship between occupational stress and interpreting. Many of translation and interpreting scholars turned their attention to the process of translation and interpreting rather than focusing on the description of the translation product (Korpal, 2016).

According to interpreter trainers, linguistic and cognitive skills have often been the main determinants features of interpreter success. Nevertheless, recently there be-came an interesting among a new trend and more attention has been devoted to the role of psychological factors (motivation, anxiety and stress resistance) in interpreting practice which referred to the term of psycho-affective turn in interpreting studies (ibid).

• The psycho-affective turn

Psycho-affective turn in interpreting studies emerged in the early 1990s and became dominant in the field just in recent years (korpal, 2016). Some interpreting scholars have realized the important of the psycho-affective factor and its impact on the interpreter performance. Bontempo and Napierv (2011) stated that "emotional stability is a predictor of work

performance for interpreters" (p.101), while Timarovà and Salaets (2011) have found that the trained interpreters on soft skills such as motivation, learning style, resistance to stress and cognitive flexibility showed more resistance to stress more than the non-trained interpreters (cited in Koval, 2016).

• The AIIC Work Study

It is a comprehensive study had been conducted to accentuate the effect of occupational stress in interpreting in terms of the three sets of parameters: physiological, psychological, physical. The study conducted upon 607 interpreters and used a sur-vey to investigate the levels of job satisfaction, feeling, work-related stress, discom-fort, and burnout. It focused mainly on deliberating physical measurement in booths, interpreters' attitudes, interpreters' physiological state and the quality of performance (AIIC Workload study, 2002). On the basis of the replies to the questionnaire, the levels of mental and physical exhaustion, cognitive fatigue and mental stress for interpreters were too high. As a result, the responses confirmed that interpreting is "a high-stress occupation performed by competent and motivated by professionals" (kurz, 2003, p.57).

The study had estimated that the relationship between stress and performance were found to be weak, commenting that highly competent and motivated workers maintain a high level of performance in case of exposure to a variety of stressful conditions (ibid).

II.4. Stress among medical interpreters

Interpreting is a highly complex activity which requires the interpreter to listen, ana-lyse, comprehend, translate, edit and reproduce the speaker's utterance in real-time. Thus, he must maintain a superior level of proficiency. The main task of a medical interpreter is to facilitate the patient understanding of illness, prognosis and treatment option. During the task, the medical interpreter may confront varied sources of stress including hurried providers, upset patients, exhausting schedules difficult terminology, heartbreaking stories, and challenging ethical dilemmas. These entire situations can be the real sources of stress which can influence the performance of the medical interpreter and long-term health and well-being (Burns, 2010).

A neurological research stated that first-person interpreting may results vicarious trauma in addition to a symptoms and reactions similar to Post Traumatic Stress Dis-order. Stress may affect the interpreter's concentration, memory, and ability to handle the mentally strenuous

complexity of language conversation, in addition to anxiety, increased blood pressure, decease immunity, and heart diseases (ibid).

Studies have shown that medical interpreting is a stressful job by nature, as the team of psychology PhD student Paulina clarified in their research, where they interviewed 13 Spanish to English paediatric medical interpreters from Children's Hospitals in Wisconsin. The team asked the participants a series of questions related to their work, stress, and coping techniques. They conclude that dealing with abuse or end-of-life care may be a challenge or source of stress for medical interpreter. Carballido, one of the team members, stated that when the interpreter works in intense situation, he may experience secondary traumatic stress. The witness of patients' trauma and stress can indirectly infect the interpreter psychology (Vickery, 2023).

Other several studies have proved that medical interpreting is a profession known to be stressful from a psychological and physical point of view as well. The stress experienced by the interpreters remains constant throughout one's career; it is not only typical for novices since experienced interpreters find their job stressful. However, if the stress remains along the interpreter career, the level of stress decreases with the acquired experience (Horváth, 2012).

II.5. Types of stress in medical interpreting

Empirical studies have concluded that the interpreters are exposed to three types of stress: Psychological stress, physiological stress and physical (environmental) stress.

> *"Three significant factors can be recognized as having potential impact on the stressfulness of the interpretation process as well as on the interpreters them-selves. These factors are: psychological parameters (perceptions, attitudes...), physical parameters of working conditions (i.e., air quality, noise insulation, lighting etc. In booths) and physiological parameters (heart rate, blood pressure etc). Each factor in itself, as well as combinations of These factors, can increase or decrease the levels of stress that interpreters Experience at work, and is also liable to affect performance"* (AIIC Workload study, 2001, p. 5-6).

II.5.1. Psychological stress

As it mentioned previously, "what can be stressful to someone cannot be stressful to someone else". In such case, the personality of the individual plays a great role (self-confidence and self-knowledge) in addition to the way each individual judges a situation.

In 1999, Loutan, Farinelle and Pampallona have conducted a study at University Hospital in Geneva about the emotional impact of the traumatic experience on interpreters. 18 member of Red Cross interpreter have been questioned through a survey, whereas the results of the effect of interpreting for such encounters indicated that 28% of participants often felt difficult emotions during the sessions, 66% experienced frequent painful memories of the session, and 83% encountered patients for whom they had interpreted outside the consultation on another occasion. The participants denoted that the most frequent symptoms of this psychological stress were nightmares, depression, and insomnia (Courtney & Phelan, 2019).

Ronkenes (1992) studied the emotional stress upon 33 interpreters in Norway, 25% of them had been exposed to organized violence whereas 20% had been exposed to other trauma. He also found that 60% of the interpreters had emotional reactions that made their work difficult, while more than 50% stated that their emotional reactions are consequences of problems outside the therapy room. 25% of them described their job as very distressing and 43% described it as to some degree distressing (Holmgren et al., 2003).

300 PSI interpreters in six European countries have been surveyed in Baistow study (2000), which resulted 55% of the participants reported a "significant emotional stress" caused by their work or the circumstances of the clients. Baistow determined that stress, frustration and grief were the most frequent feelings experienced by interpreters. While 39% of the participated interpreters stated that they experience strong feeling of anxiety, irritability, fear, mood swing, confusion or feeling disturbed during performing. 38% reported they rarely experience these emotions, and 8% reported that they often experience them (Courtney & Phelan, 2019).

The aforementioned studies emphasized the importance and the effect of the psychological and emotional status of the interpreter on his job performance and well-being. As they also demonstrated how can interpreting effectuate several psychological factors that undermine interpreters performing their work effectively.

II.5.2. Physiological stress

The act of interpreting requires sustained attention and imposes a prolonged mental load, which results in the need for high physical capacity; When stress occurs, it manifests itself in

physiological responses (sympathetic and neuroendocrine hyperactivity) (AIIC, 2002). Recently, researchers have started looking at physiological stress as an objective sign of stress.

Both blood pressure level and cortisol secretion both are the most frequent physio-logical markers of stress incidence, and they are used in most studies to measure. A "Pilot Study" was handled under the supervision of Ingrid Kurz to examine the stresses of simultaneous interpreting for conference interpreters and students by using physiological parameters by measuring the pulse rate of two expert simultaneous interpreters in a medical conference and three students in an English/German simultaneous interpreting class to interpret a text that they had received a week in advance. Despite the difficulty of medical interpreting and the highly technical language they used, the interpreters pulse rate values remained within the normal range, while the pulse rate for all three student interpreters was remarkably higher than the two conference interpreters. Experienced conference interpreters have shown that no marked signs of physiological stress were observed due to their experiences and training in coping with stressful situations, in addition to adopting the right techniques. In contrast, there was a higher physiological stress within novices (students of interpreting) despite working in ordinary classroom situations and within a text that had been available in advance (Kurz, 2003).

The second physiological marker of stress that many studies depend on to measure the stress exposed by the interpreter is cortisol, which is a steroid hormone produced in the adrenal glands in response to stress. Its function is to maintain normal physiological processes during times of stress. Elsewhere, Moser-Mercer and others (1998) examined the effect of the prolonged turn of the interpreter on his physiological and psychological status and the quality of the interpretation. The scholars adopted the cortisol concentration as a physiological measure of stress, and the researchers concluded that the prolonged turn in simultaneous interpreting may indeed increase the stress response and disrupt the quality of interpretation (Korpal, 2016). Cortisol is needed for the restoration of energy stores following stress and to prepare the body for the fight-or-flight response in stressful situations. The body overproduces the cortisol hormone through a series of complicated events that involve the hypothalamus and pituitary glands in the brain. Elevated cortisol levels from chronic stress are associated with multiple health problems, such as increased appetite and food craving, which lead to obesity, increased anxiety, depression, memory impairment, heart dis-ease, diabetes, and cancer (Talbott, 2002).

Blood pressure is also believed to be a physiological indication of job strain and psychological stress. Many experiments used blood pressure as a physiological measure to investigate the notion of stress for interpreters, including a study conducted by Klonwicz (1994) that used blood pressure and heart rate; Hence, the study emphasized the functional significance of the pattern of changes in cardiovascular activity (Korpal, 2016).

II.5.3. Physical (environmental) stress

Environmental or physical stress is related to the job environment and working conditions, including some factors such as temperature, humidity, and air quality in the workplace. Several studies try to investigate the impact of the work environment on the stress of interpreters. The technical and health committee of the International As-sociation of Conference Interpreters (AIIC) found that working conditions were mostly poor and unacceptable during practice. According to the standards recommended by the International Organization for Standardization (ISO), there were major inadequacies concerning temperature, relative humidity, and CO_2 levels. There are other physical factors that cause difficulty and poor delivery of texts and affect the interpreting performance, including fast speakers, textual complexity, poor delivery, and non-native speakers, among others. The unavailability of materials in advance and preparation obstacles may hamper the interpreters' workflow, which con-tributes to stress (Horváth, 2012).

II.6. Causes of stress for medical interpreters

The stressful nature of medical interpreting activity can be attributed to multiple factors.

II.6.1. Internal factors

II.6.1.1 Feeling of threat: Being a medical interpreter puts the individual in a sensitive position with great responsibility for people's lives. Any misinterpreting will inevitably lead to troubles in the patient's outcome and disrupt the physician's task. All these serious aspects cause a feeling of stress for the interpreter and put his professional reputation on the line, as Jiménez and Pinazo (2001) stated: "This threat can objectively result in academic or professional failure and loss of social prestige or self-esteem" (p. 107).

II.6.1.2. Standing of judgment of others: Expecting that a medical interpreter is a linguistic expert who can never be mistaken, along with his familiarity with different terminologies, necessitates his awareness of the potential judgments and consequences that may arise from any behaviour outside the scope of competence or any failure in his task that results in stress.

II.6.1.3. Lack of self-confidence: Lack of competence is deemed one of the main reasons for lack of self-confidence, which makes the interpreter fear making mistakes, others' judgments, and losing his social and professional prestige.

II.6.1.4. Lack of experience: Studies have shown that novice interpreters experience work stress more than experienced ones (Kurz, 2003). Well-trained and experienced medical interpreters are able to cope with stressful situations and adopt the right technique to perform effectively under various conditions.

II.6.2. External factors

II.6.2.1. Ethical dilemmas challenging: Due to the viable involvement of the interpreter in the medical encounter, he may be put in a situation in which his ethics could be tested. Thus, the interpreter ought to adhere to the requirements of his role as a linguistic and cultural assistant, and not to infringe on the provider's authority or patient's autonomy (Heish, 2010).

II.6.2.2. Exhausting schedules: Consecutive consultations and a lack of rest times may put the medical interpreter under constant pressure.

II.6.2.3. Difficult terminology: Some interpreters indicate that they are challenged to accurately interpret certain terminologies because of insufficient preparation for the context of the encounter or a potential lack of vocabulary (Lim et al., 2022).

II.6.2.4. Sensitive situations: Heartbreaking stories and psycho-emotional situations can cause stressful feelings among medical interpreters, which make it difficult to control their emotions, or "emotional stamina".

II.6.2.5. Provider-interpreter relationship: Healthcare providers may perceive the presence of the interpreter during medical consultations as a disruption due to experiencing a loss of time control and feeling excluded from the interaction with the patient. In contrast, interpreters feel discomfort and distress with a hurried and unappreciated provider.

II.7. Consequences of stress for medical interpreters

Continuous exposure to stress for a long period of time makes the body permanently activated for the stress response system (human natural response); This reaction is called "Generalized Stress Response", and it is associated with mental problems in addition to behavioural, physical, and psychological harm (Bickford, 2005).

II.7.1. Mentally

II.7.1.1. Difficulty in concentration: When the medical interpreter experiences stress, his ability to comprehend the messages of the speakers decreases, and he may ask for repetition more than once.

II.7.1.2. Awkwardness of memory: Stress can highly affect the interpreter ability of memorizing, which made it difficult to find the equivalent of words sometimes.

II.7.1.3. Freezing: Or the "freeze response" (Psychomatics, 2004), is a term that refers to hypervigilance (being on guard, watchful, or hyper-alt) (Gray, 1988). During this response, which results from stress, the interpreter stops, looks, and listens but is unable to react or respond.

II.7.2. Physically

II.7.2.1. Headaches: Stress can cause many types of headaches when the levels of stress hormones drop, which creates a rapid release of neurotransmitters (the brain's chemical messengers). These send out impulses to the blood vessels to constrict and then dilate, which causes a headache (Pietrangelo, 2023).

II.7.2.2. High blood pressure: The body releases a surge of hormones that produce a faster heartbeat and tighten the blood vessels during stress. These actions can increase blood pressure.

II.7.2.3. Decreased immunity: Stress affects the immune system, making the body more vulnerable to catching illnesses. When stress arises, cortisol levels rise and the immune system weakens. A prolonged high level of cortisol makes the body susceptible to viruses and

infections. The best example of a stressful life event that causes chronic stress is the pandemic period of the Corona virus. The stress that most people experienced during this period was one of the main causes of getting infection (Sanitarium, 2023).

II.7.2.4. Heart diseases: Increased heart rate and high blood pressure damage the arteries, which could lead to a heart attack.

II.7.2.5. Hormonal changes: The body responds to stress by releasing adrenaline and producing the cortisol hormone, which affects the body's organs.

II.7.3. Psychologically

II.7.3.1 Depression: The effects of chronic, or long-term, stress can be harmful on their own, but they can also contribute to depression, a mood disorder that makes the individual feel sad and disinterested in things he usually enjoys. As well, depression can cause stress. It simply means that the impact of stress on depression is vice versa (Cooper, 2021).

II.7.3.2. Anxiety: Anxiety is clearly related to stress, as it is a consequence of harmonical changes that make anxiety worse.

II.7.3.3. Irritability: It is a state that involves feelings of anger or frustration from being impatient and quick to get annoyed, especially over small details.

II.7.4. Behaviourally

II.7.4.1. Increased use alcohol/ drugs/ smoking: As cited in (Koval & Liliia, 2016), people are not able to manage the stress, they use relaxants such as smoking, alcohol, or drugs (Leka et al., 2003).

II.7.4.2. Poor job performance: Most of the time, stress is a result of the job environment, which directly affects job performance. The quality of interpretation is highly influenced by the psychological status of the interpreter. As cited in Jamal (1984), elevated levels of job stress result in low performance. When the individual experiences stress, it leads him to spend more time coping with stress, which reduces the quality of his job (Anderson, 1966).

II.8. Stress management

Daily life is plenty with unpleasant situations and stressful circumstances. "People who cope well with stress usually have a positive outlook on life" (Smith & Pergola, 2003, p.1). Stress management in life could influence how and why one perceives and reacts to the provoking situations.

Adapting stress literacy via identifying the problem and its stressors, symptoms and rating level, understanding stress type, whether acute, episodic acute or chronic, and implementing the best proactive stress reduction and reframing techniques can ensure a healthy physical state and a quiet mind in stressed situations.

Setting tailor coping stress management strategies is a keynote control for stress hormones and person well-being, and it differs from one person to another in terms of body and mind systems at various points. Along this line, peace of spirit and mind relies on accurate strategies and relaxation techniques for better decision-making in such situations because good coping skills equal less stress and high-quality performance. Many recent studies have shown this to be true.

II.9. Stress management in medical interpreting

Historically, studies in interpretation assumed that interpreters ought to have coping mechanisms in stress-charged situations (Knodel, 2018). Dean and Pollard (2001) claimed that "positive or negative outcomes of a given occupational situation are not dictated to job demands, but by the relation between demands and control" (p.6).

Medical interpreting is a demanding profession where the brain is systemized to do multiple tasks at once, including listening, memorizing key words, understanding the content of the message, and reproducing it for the patient or healthcare staff in an-other language, so the concentration level has to be high because attention shifts from one person to another. Medical interpreters function as technical professionals, and they face demands related to multiple intrapersonal and interpersonal demands (Knodel, 2018). There are warranted stress management techniques and strategies that clinical interpreters should be aware of if they confront stressful scenarios in or-der to be controlled along with achieving a relaxation state.

II.10. Stress management Strategies for medical interpreters

There are a number of stress management strategies that medical interpreters can use to better cope with and confront stressful working conditions.

II.10.1. The understanding of self and stress

In order to initiate the stress management process, the interpreter have to problem-focused coping. The first stage must be undertaken is identifying early physiological symptoms like bruxism and headaches, recognizing the main triggers and their nature (workplace demands), and then seeking problem-focused solutions by adopting tailored coping strategies to be practised prior to performing so as to control stress-related work and do a better job.

II.10.2. Demand Control Schema (D-CS)

It is indicated by Dean and Pollard (2001) that various demand-generating elements, involving environmental, interpersonal, intrapersonal, and linguistic demands, are associated with the interpreting profession. Demand control schema (D-Cs) is an established approach "that enables the interpreter to analyze the demands of a situation, discuss the control options available and understand why certain values were prioritized" (Lesser, 2019, p. 8–9) to mitigate the effects of stress-related pathologies (Dean & Pollard, 2001).

Interpreters operating in healthcare settings are regularly faced with various challenges, such as exposure to intricate interpersonal interactions and distressing life events, where proficiency in such cases is deemed essential for them in order to deliver effective interpretation services in diverse and specialized domains of medicine, encompassing cardiology, oncology, genetics, and nephrology, among others (Lesser, 2019).

The practice of interpreting within a healthcare setting necessitates the continuous application of accurate decision-making skills. This objective can be attained by integrating a comprehensive set of controls that enable interpreters to effectively execute their duties with the utmost proficiency.

II.10.3. Relaxation techniques

There exists a plethora of relaxation techniques that aid in the activation of the body and the reduction of stress, resulting in the attainment of a balanced state.

II.10.3.1. Progressive muscle relaxation technique

Progressive muscle relaxation (PMR) technique is a systematic type of relaxation therapy to alleviate and control stress states by inducing "slow breathing technique in conjunction with muscle relaxation" (Brunero et al., 2006, p.28). The technique can be traced back to 1908s at Harvard University as an initial idea by Dr. Emund Jackobson, who investigated that tensed muscle fibres are the reason behind arousing stress; It continued to progress until 1934s when Jackobson wrote "You Must Re-lax", and in 1938s he introduced his technical book entitled "Progressive Relaxation" (Bernstein et al., 2000). It has been widely researched as an effective mechanism in different domains (e.g., Joy et al., 2014; Shinde et al., 2013).

PMR exercise is divided into two essential steps, which are tensing and relaxing body muscles (Klinic Community Health Centre, 2010), and lasts around fifteen minutes. It takes place in a quiet, restful position full of positive thoughts, where subsequently each group of the entire muscles of the body, from the forehead and eyes towards the feet and toes, tense for a few seconds in the course of tight closed eyes along with breathing in, then relax and release as the practiser breathes out deeply, as explained by the Klinic Community Health Centre (2010):

• Starting by tensing the face muscles of the forehead, eyes, nose, ears, lips, and teeth and counting for eight seconds, then relaxing.
• Moving to the neck, shoulders, and arms muscles and acting the same as preceded.
• Finishing by the chest, abdomen, buttocks, and feet muscles and continuing counting along with inhaling, hence exhaling, and attaining laxity.

Throughout regular processing of the mentioned physiological therapy, mental-physical health will strengthen, and body stress responses will be relieved immediately. Regarding medical interpreters, it is a helpful strategy to maintain readiness and freshness in sensitive interpreting conditions at any time.
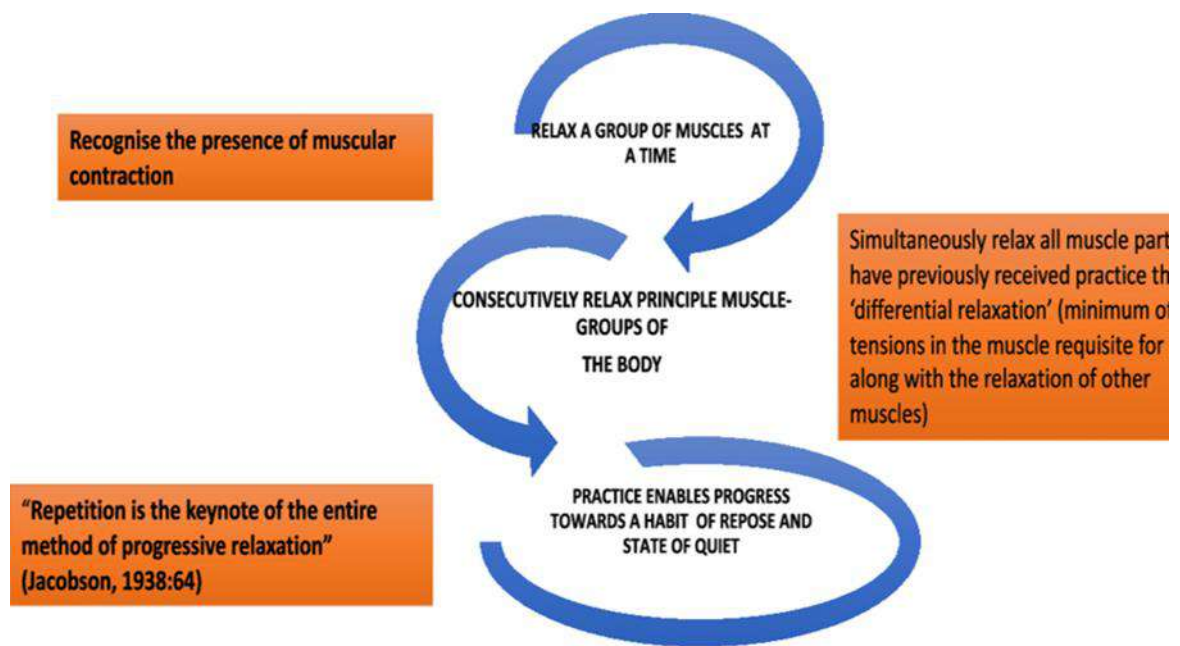
Figure 7: Principles and Techniques of Progressive Muscle Relaxation as expounded by Edmund Jacobson (Ross & Amir, 2020)

II.10.3.2. Guided imagery (Visualization)

APA has defined guided imagery GI as "a mind-body technique involving the de-liberate promoting of mental images to induce a relaxed, focused state with the goal of achieving such varied purposes as managing stress or pain, promoting healing, or enhancing performance".

GI is a technique that has been used since ancient times; It refers to an established approach in Chinese medicine and American Indian traditions (Karu, 2020). As stat-ed by Kuppuswamy and Padmaja (2018), Dr. David Bressler and Dr. Martin Rossman further developed and supported GI in the 1970s as an efficient therapy, and recently it becomes a based practice in complementary and alternative medicine. There are various GI forms, and the most commonly used types according to Kuppuswamy and Padmaja (2018) include:

1. Relaxation imagery: evokes enjoyable relaxing images for physio-psychological rest.

2. Healing imagery: to visualize having healthy body system.

3. Pain control imagery: using multiple techniques to imagine controlling and alleviating the pain.

4. Mental rehearsal: to picture a scenario and its results.

GI is a simple stress management technique that is also known as "guided mediation, visualization, mental rehearsal, or guided self-hypnosis" (Karu, 2020, p. 467). It denotes a rapid physical and mental relaxation state through effective unconscious-conscious mind communication, active imagination, and the creation of future scenes away from stress using all the senses: sight, touch, sound, taste, and smell to generate truly memorable pictures that seem the same as reality.

According to the Klinical Community Health Centre (2010), this psychophysiology technique is based on a specific structure and is adapted as follows:

• Assuming a comfortable position and focusing on deep breathing through the nose and out the mouth with eyes closed to get a calm mood.

• Choosing a peaceful setting like a beach, forest, garden, meadow, or mountain, depending on the personality of each individual, to picture vivid mental images invoking all the sensations Listening to classical music or nature sounds such as waves, jungle, soft wind, birds, and rainfall is frequently helpful when resting.

• Full cognitive concentration with deep emotions related to the images to bring it back from short-term or long-term memory (incident event or created fiction). Then, beginning the imagination journey, plenty of sweet dreams and positive thoughts to guide the experience until relaxing feelings occur.

• Finally, before the eyes open, it is recommended to self-tell that once comeback from this journey to present life, everything will be alright and that returning is easy whenever relaxation is needed. Then, counting back to 10 and slowly opening the eyes.

Imagery therapy is an inexpensive method that needs only "pencil and paper, listening skills, and imagination" (Skeens, 2017, p. 98) to vivid the mentality, reduce stress implications such as high blood pressure, insomnia, and headaches, and enhance the performance of medical interpreters.

II.10.3.3. Meditation

Meditation is an earliest practicing technique in Eastern culture, seeking to fulfil a definite purpose through deep thinking without interruptions for a moment. It is a zero-effort tool that needs only uniting mind-body well-being to be undertaken. Anyone is able to master meditation practice without special qualities (Kim, 2022). Meditation helps to improve particular skills as

letting go, cultivating attention, and easing judgment into daily life (ibid). As a result, to reach alpha state level (Pathath, 2017).

The neuroscientist and neuropsychiatrist Fox and Cahn subsequently, described the term meditation as "a family of mental training practices aimed at monitoring and regulating attention, perception, emotion, and physiology (e.g., respiration or level of arousal)" (2020, p. 2).

It is a valuable mind-body medicine to induce relaxation and promote health. Ivanovski and Malhi (2007) reported that it as the pair process and a state. It involves various practices of cultivating stress resilience and improving concentration ability to provide what best fits the needs of each individual, and mindfulness meditation is the most prominent one.

Mindfulness meditation

Mindfulness meditation is a practice "involves the cultivation of moment-to-moment, nonjudgmental awareness of one's present experience, whether narrowly or more broadly focused" (Kristeller, 2007, p. 395). It is established as an approach in contemporary psychology due to emotional distress and maladaptive behaviour contributions for the sake of consciousness raising and skilful responding to mental processes (Bishop et al., 2004). Cultivated meditative awareness relies on cognitively realizing the need and where to attain it in order to easily control matters as desired (Santorelli, 2014). Mindfulness meditation consists of a variety of formal and informal practices for everyday use to increase calm, such as walking meditation, breathing meditation, body scan and other practices. Constant mindfulness mastery will reinforce the areas of the brain system associated with happiness and relaxation responses (Klinic Community Health Centre, 2010), yet it recommends following certain instructions for truthful tranquilization.

"Mindfulness can be taught and encouraged in interpreter education and ongoing professional development" (Crezee et al., 2015, p. 78), particularly in sensitive set-tings that require high concentration levels, like healthcare settings, in the event the medical interpreter confronts interpersonal or intrapersonal issues that may affect his performance and the patient's health. So, adapting the exercise tends to increase attentional aspects, encompassing distractor suppression, broad-mindedness, and sensivity (Ivanovski & Malhi, 2007).According to Santorelli (2014), the Executive Director of the Center for Mindfulness and Professor of Medicine, there are seven backbone pillars of mindfulness practice, including: suspending judgment, quality patience practice, a beginner's mind by means of seeing everything as if it had not happened before, truth as a basic attitude, non-striving by being attentive to the pre-

sent moment, accepting moments as they occur, and letting go of experience. When adhering to the seven designated pillars, the medical interpreter is provided with ap-propriate management and guidance in order to act appropriately and effectively handle high-pressure situations within the healthcare environment.

Mindfulness meditation practice is based on immediate concentration and attention-al resource characteristics (Goilean et al., 2020), making it seem like an easy activity that any individual can practice either alone or by involving in teaching mindfulness meditation programs as the mindfulness-based stress reduction program (MBSR). MBSR is a clinical groundbreaking 8-Week program with CFM at the University of Massachusetts Chan Medical School. First originated in the 1970s as a Centre of Mindfulness (CFM) by Dr. Jon Kabat-Zinn, PhD, to incorporate mindful awareness into the challenges and adventures of everyday life (UMass Memorial Health Center for Mindfulness).

A mindfulness exercise routine will guarantee peace of mind and general well-being by redirecting and managing internal mental struggles. Thus, the better the results, the greater the amount of time spent meditating (Goyal et al., 2014).

II.10.3.4. Deep breathing technique

The deep breathing technique is a mental method that coordinates body and mind to relieve mental issues (stress, anxiety, depression) and promote a tranquil state. More-over, it is easy to apply in daily life.

The AIS (2012) suggests that breathing technique is a super stress-busting strategy that can help reduce anxiety and stress by increasing oxygen to the brain and activating the parasympathetic nervous system. The Klinic Community Health Centre (2010) mentioned it in terms of diaphragmatic breathing, which implies respiration from the abdominal region as opposed to the thoracic cavity and nasal passage. In 2017, the Therapist Aid published a worksheet included the ways of practicing deep breathing exercises that are activated by assuming a supine posture in a relaxed set-ting once feeling stressed and then adopting the following instructions. First, inhaling slowly for four seconds, then pausing for another four seconds to hold the air in the lungs as much as possible. Lastly, exhaling bit-by-bit through the mouth for six seconds. Finally, repeating the practice from two to ten minutes. During the process, attempting to physically place the hand on the abdominal to feel in synchronized

manner the ascension and descent of breath with each inhalation and exhalation so to ensure deep breathing and increased oxygen supply.
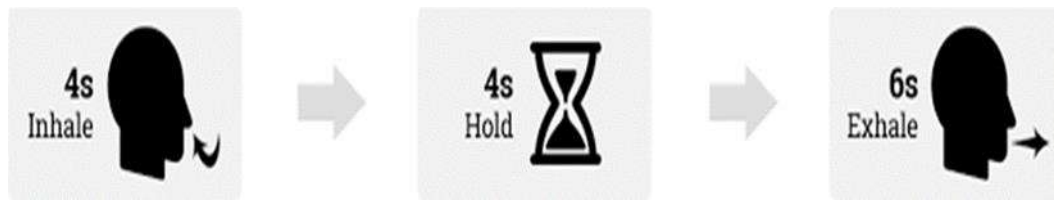
Figure 8: Deep breathing technique (Therapist Aid, 2017)

II.10.3.5. Yoga

The practise of yoga has been traced back to its roots in India years ago, making it a time-honoured science (Dwivedi et al., 2014). It is defined as "a holistic system of mind-body practices for mental and physical health and incorporates multiple techniques including physical postures and exercises that develop strength and flexibility, breathing exercises, deep relaxation, and meditation/ mindfulness techniques to train attention" (Noggle et al., 2012, p. 194).

In fact, as Dwivedi et al. (2014) stated, yoga is an effective strategy for coping with stress as it promotes inward reflection, utilizes diverse techniques to combat stress, as well as it trains mind-body muscles to improve the ability to manage stress, respond with skill and grace, and adjust attitudes regarding stress, which enhances well-being, promotes self-esteem, and cultivates serenity. According to Dr. Natalie Nevins (a Neuromusculoskeletal Medicine specialist), yoga is a useful practice that ensures a healthy mind and body along with permanent engagement to preserve   tranquillity, alertness, and lessen stress.

II.10.3.6. Cognitive restructuring/ reframing

Effectively managing stress necessitates recognizing the origins of stressors in life and devising methods to evade them or curtail their influence because they can arise from personal habits and characteristics, which can lead to negative consequences that can be alleviated through cognitive restructuring approaches (AIS, 2019).Cognitive restructuring is "a specific

therapeutic skill that specifies how an individual should change their thinking, and directs an individual to shift their thoughts and beliefs in a particular adaptive way" (Johnco et al., 2014). In other words, the act of questioning one's own thoughts to modify them is what cognitive restructuring entails.

The process of cognitive restructuring (also known as cognitive reframing) is a com-ponent of cognitive-behavioural therapy (CBT). It encompasses a multitude of methods and proceeds in three steps. The process initiates with the recognition and label-ling of ingrained illogical and pessimistic thought patterns (cognitive distortions); The former can occur with such rapidity that one may fail to observe their on-set and departure. Their actions are akin to an instinctive response rather than a deliberate conduct; Cognitive restructuring entails psychoeducation to comprehend cognitive distortions, which in turn enables the identification of cognitive distortions of the individual along with the triggers for stress, followed by increased awareness of thoughts, then recording thoughts as a technique for documenting occurrences in addition to the related thoughts, emotions, and conduct (Therapist Aid, 2018).

The aforementioned practice can be imparted as a means of self-management psychotherapy for medical interpreters to address negative affective states that they may confront during interpreting sessions through the elucidation of perturbed thoughts that underpin mental disorders. These thoughts involve anticipating an inadequate level of preparedness for the task and uncertainty regarding the selection of an optimal mode of interpretation, along with the trepidation of committing errors while performing by reason of experiencing distortions that impair the interpreter's concentration, namely medical terminology challenges, unclear communication between patient and healthcare provider, an uncomfortable workplace environment, and so on. This, in turn, may result in lower interpretation quality and ultimately threaten patient outcomes. Furthermore, utilizing cognitive restructuring techniques to substitute negative emotions with balanced thoughts according to the way that best suits each interpreter's thinking to relieve stress can prove to be a valuable tool for raising consciousness about the disorder, especially prior to reaching a certain level.

II.10.4. Healthy lifestyle adjustment

Adopting healthy lifestyle can be the simplest treatment for medical interpreters to deal with stress contributors and maintain a work-life balance.

II.10.4.1. Enough sleeping and rest

Interpreters are required to have a comprehensive understanding of themselves as professionals, encompassing both their areas of expertise and limitations, alongside their responses to stressful situations; The attainment of this objective can be accomplished through a methodical process of introspection, whereby individuals critically evaluate themselves, their educational experiences, personal incentives, and their responses to stressors (Horváth, 2012).

Adequate rest and enough sleep play a crucial role in the healthcare interpreting profession to enable interpreters to recharge and lower stress levels efficiently. As long as the task of interpreting in such a setting requires a regular biological clock to assure frequent focus and a constant awareness of safety precautions with the purpose of increasing alertness, optimizing interpreting productivity, and preventing irrational thinking.

II.10.4.2. Nutrition

Interpreters should pay attention to their nutrition because sustaining it as a part of their lifestyle will increase their energy to combat daily stressors and decrease cortisol levels in the bloodstream. Ultimately, a healthy diet full of the required vitamins and proteins and free from high amounts of caffeine and sugar intake can promote overall vitality throughout the day.

II.10.4.3. Physical activity

According to APA (2020), physiologically engaging in physical activity reduces levels of s stress-related hormones such as cortisol and epinephrine, and provides the body with an opportunity to develop coping mechanisms for managing stress and boost the body mechanisms to interact in a manner that guarantees psychological well-being. The same source added that various professionals viewed regular physical activity as equally effective in managing mental disorders comparable to antidepressants since it can prompt the secretion of dopamine and serotonin hormones that are responsible for generating feelings of happiness, and eventually leading to a better mood; Extensive research has shown that engaging in physical activities can have an immediate as well as a long-lasting impact on cognitive abilities such as memory and cognition.

By participating in intense physical activities as biking, walking, gardening, practicing aerobic exercise or hobbies, and so on, a medical interpreter will be able to cope with stressful work conditions and avoid becoming incapacitated.

II.10.4.4. Time management

Time management is "a form of decision making used by individuals to structure, protect, and adapt their time to changing conditions" (Aeon & Aguinis, 2017, p. 311).

It is a necessary process to organize professional and personal lives (ibid), since monitoring the amount of time allocated to each task helps in maintaining daily schedules to increase productivity, alleviate the burden of stress, reduce superfluous demands, and decrease the workload (Panigrahi, 2016).

Being able to effectively manage time is crucial for interpreters to preserve work-life balance, especially when dealing with emergency services that have unpredictable schedules (Crezee et al., 2015), when medical interpreters might be called and needed at any time during the day. It is important for interpreters to allocate enough time for positive vibes to impact the quality of their interpretation and overall job performance.

II.10.4.5. Social support

Interpreters frequently encounter various sources of stress that subsequently affect their professional performance. Insufficient social support resulting from deficient or inadequate communication acts as a prevalent factor contributing to the experience of work-related stress. As claimed by the Veterans Health Administration's National Center for Health Promotion and Disease Prevention (NCP), social support is an integral element of efficacious stress management, and having such a support system, including friends, family members, and individuals who show their caring, is crucial for optimal emotional support.

The supportive sense contributes to a peaceful, quiet life with little or no disruptions rather than loneliness because having a social support network enhances relationships, boosts performance, and protects against stress (Jolly et al., 2021).

II.10.5. Preparation

Medical interpreters must consistently pay significant attention to the latest medical terminologies and glossaries relating to medicines or diseases, as they are updated daily. Maintaining adequate readiness is crucial to being at the level of expectations in order to provide high-quality service and avoid getting flustered, since interpreters cannot predict the scenarios they may encounter.

Moreover, as long as the interpreter is interpreting in healthcare services, he may face various difficulties related to the extent of his language proficiency skills, particularly in terms of dialects and accents, because of the cross-cultural differences as he may interpret for immigrants or refugees. Being a medical interpreter entails having strong cultural and linguistic competence, which aids in taking responsibility for the patient's well-being.

Possessing sufficient extra-linguistic knowledge facilitates the comprehension and prevents experiencing potential embarrassment or stress, thus, the best performance capacity.

II.10.6. Flow management

In certain circumstances, the medical interpreter is required to assert his professional presence. This may occur when either the patient or the healthcare provider is speaking too fast, experiencing difficulty understanding what is being asked, or even neglecting to acknowledge the interpreter's presence. In such instances, it is necessary for the interpreter to directly interrupt the flow and request the repetition of the in-formation, as a professional, in order to accurately convey it to the concerned party (Lobo, n.d.).

For interpreters, possessing the recommended skills to manage the flow of communication along with the ability to direct attention towards clinician-patient interpersonal interaction is integral to ensuring accurate message delivery without missing any important detail and enabling the parties to reach mutual understanding independently (International Medical Interpreters Association & Education Development Center, 2007).

II.11. How technology can help in managing stress?

The recent century has been characterized by technological developments that have become an integral part of any individual's life. On that account, technology can be a great assistance in

the framework of a stress monitoring system for managing work-related disorders for interpreters.

II.11.1. Wearable sensors

The subject of constant monitoring of stress levels through physiological indicators has undergone considerable attention in light of notable progressions in the field of wearable technologies, where the timely detection of stress and its potential impact on the overall well-being of individuals has underscored the importance of such monitoring as a means to mitigate the adverse effects of prolonged exposure to stress (Iqbal et al., 2022).

A number of studies have been conducted to reveal the importance of wearable sensors for stress relief. Hence, sensors can detect the physiological changes triggered by multiple stressors that lead to stress (Gedam & Paul, 2021).

The most popular wearable sensors for health monitoring include smartwatches such as the Apple Watch, Fitbit, and Garmin, and smart stress-relief accessories like Oura Ring and Sensate, which aim to track heart rate, blood pressure, respiratory rate, sleep amounts, body temperature, and physical activity, among others. Technological de-vices without screens can communicate the recorded information to applications up-loaded to personal smartphones.

Figure 9: Fitbit Sense 2 stress tracking (Eadicicco, 2022)

Figure 10: Oura Ring (Dc Rainmaker, 2021)

II.11.2. Applications

Contemporary smart electronic devices (smartphones, tablets) incorporate an extensive range of applications, encompassing a plethora of techniques designed to alleviate stress disorders (Anagnostou & Drigas, 2022).

Breathe2Relax is a free, user-friendly mobile application. It was created by The National Centre for Telehealth and Technology to promote coping mechanisms for stress and give in-depth details on how it affects the body through diaphragmatic breath control in order to reach a relaxed state (Freeman, 2017).

Calm is a mindfulness meditation application and efficacious stress management software that offers a range of meditations leading to mental fitness, including audio programs, soothing sleep stories, relaxing music, and nature sounds, among others. Moreover, the duration of the practice can be as short as a few minutes or as long as an hour.

Stress Monitor for Watch 12+ is a stress tracker application that is available for free on Apple Watches to assess immediate stress levels and performance capacity.

Conclusion

Overall, stress is considered a key issue in the modern workplace, and in occupations that are described as stressful, such as interpreting, the effect of stress has reached a high level of damage (mental, physical, psychological, behavioural) which makes it the centre of many interpreting studies that try to investigate the source of stress. Medical interpreting occupies an important part of this research due to its seriousness. Thus, a number of strategies have been provided in this chapter to help medical interpreters manage and cope with the stress they are exposed to during their performance.

Practical Part

CHAPTER. III

Stress Management for The Medical Interpreters of The Algerian-Cuban Eye Hospital of Ouargla (Analysis)

Introduction

The present chapter aims to investigate the strategies of stress management that medical interpreters may use in case they confront stress-inducing situations in a hospital setting. That is, the chapter concerns the practical application of the preceding theoretical part by providing the implemented research design of the current study, the adopted methodology, and the way of gathering the data for this study. Subsequently, the latter is followed by the analysis and discussion of the findings of the questionnaire in order to answer the main research questions of the study:

- How could medical interpreters manage their stress and continue performing at their absolute best?
- What are the sources of stress that affects the medical interpreter's performance?
- To what extent could stress management influence medical interpreters?

III.1 Research design

III.1.1. Participants

The target population included the medical interpreters of the Algerian-Cuban Eye Hospital of Ouargla. A non-random purposive sampling approach has been adopted for the present study to deal with the small population of expert interpreters that in-volved only four medical interpreters instead of eight as was supposed due to their refusal to respond and participate in the study, in which their refusal could be an answer for the current study. In addition to increasing the trustworthiness of the results through in-depth questioning of the participants. Three of the participants were male and one female, and they had a Bachelor's degree in Spanish Language.

The research elicited responses offered by the participants and recorded them with-out any alteration to share their insights regarding various aspects related to stress if they encounter it, including triggering factors, symptoms, coping mechanisms, and the required qualifications for best stress control, and to guarantee the credibility of the findings. In an attempt to ensure the anonymity of the interpreters, specific   pseudonyms (i.e., R1, R2...) will be utilized within the context of this study.

III.1.2. Methodology

In accordance with Professor Creswell (2014), implementing an approach of mixed methods research to collect both structured (closed-ended) and unstructured (open-ended) data can improve a better understanding of the research problem by integrating statistical trends with stories and personal experiences rather than relying solely on one type of data.

To achieve the research goals and increase its validity and reliability, a mixed method of qualitative and quantitative methods, including explanatory and quasi-experimental designs, is adopted to answer the problematic question of how medical interpreters can manage stress.

III.1.3. The instrument and data collection

With the aim of answering the central research inquiries, a traditional survey questionnaire was designed. The questionnaire is a combination of 31 unstructured-structured questions, 6 open-ended, 7 closed-ended, and 18 Likert-type rating scales which range from "Never" to "Often". To obtain the required data, the questionnaire had been divided into five sections. The first section contains questions regarding the background information of the participants (age, gender, educational certification, work experience, training, working languages, work conditions). The second section involve questions on the role of the medical interpreter. The third section consisted of questions related to the frequent stressors that medical interpreters may face at work-place. The fourth, and fifth sections tackle successfully: the consequences of stressful situations and stress management strategies in medical interpretation. The questionnaire used in the study is provided as an appendix.

III.2. Data analysis and discussion
III.2.1. Analysis of the questionnaire submitted to the interpreters

The target medical interpreters were asked to answer a survey questionnaire of 31 questions classified as the background information of the medical interpreters, their roles, the frequent stressors, the consequences of stressful situations, and stress   management strategies for an in-depth analysis of the findings of the study.

III.2.1.1. Background information

a. Age

Due to the importance of age demographic questions, medical interpreters were re-quested about their ages. The data collected from them indicates that their ages vary between 35 and 50 years old. This reveals the determined knowledge and experience that these interpreters acquire in the field.

b. Gender

Gender	Female	Male	Total
Number	01	03	04

Table 01: The gender of the interpreters
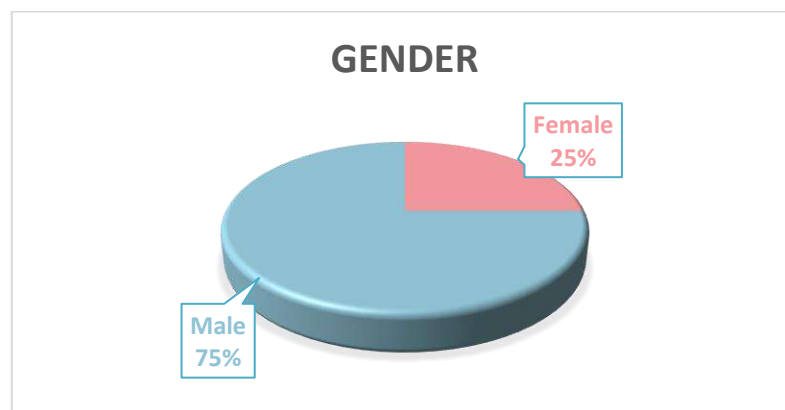
Figure 11: The gender of the interpreters

The above Figure 11 illustrates that the numerical representation of male medical interpreters is higher as compared to females. The current investigation examines a sample of four medical interpreters, of whom three are male and represent 75% of the total sample. whereas one female represents 25% of the total sample. This indicates that both genders possess the qualifications to work as healthcare interpreters, yet males have a greater tendency to commit to this profession than females due to its inherent difficulty as a profession, since attaining success in this field necessitates a heightened level of effort.

c. Educational certification

The four medical interpreters of the Algerian-Cuban Eye hospital of Ouargla were asked about their educational certification. The responses provided by the participants indicate that the whole sample has a Bachelor's Degree in Spanish Language.

d. The interpreters experience (Results of question 1)

Working Years	From 0 to 1	From 2 to 3	From 3 to 5	More than 5
Numbers	00	00	00	04

Table 02: The working years of the interpreters
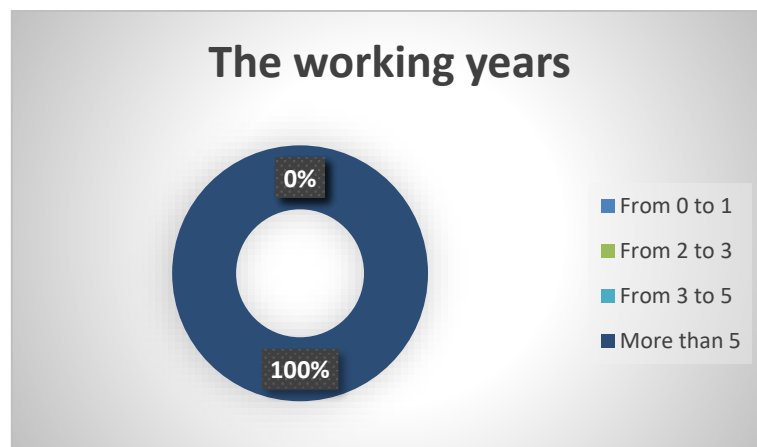
Figure 12: The working years of the interpreter

100% of the medical interpreters included in the survey reported that they have been working since more than five years. This finding demonstrates that all the respondent interpreters at the Algerian-Cuban Eye Hospital of Ouargla have extensive expertise in their work. Thus, a considerable degree of professional experience and competence is essential to functioning effectively in such a medical setting.

e. Training (Results of question 2)

Results of Q 2: Have you received a special training in medical interpreting?

25%

75%

■ Yes ■ No
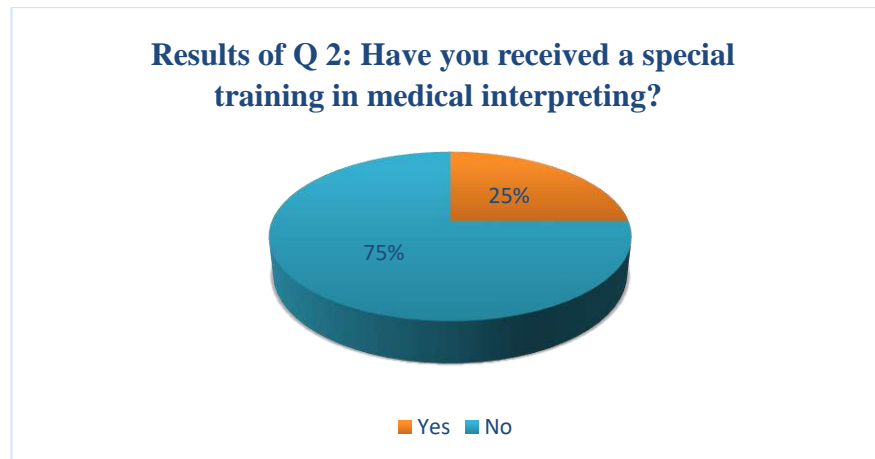
Figure 13: Responses to the training of medical interpreters

The above graphic depiction shows that 75% of the sample of medical interpreters answered by "No" and revealed that they have not received any special training pertaining to the field of medical interpretation. However, 25% of them answered by "Yes" and asserted that they had received the training. Through these results, it is assumed that the acquisition of expertise and proficiency in medical interpretation does not rely solely on specific training programmes, but rather on self-training and practical experience in order to enable the interpreters to address any difficulties in the domain.

f. Working languages (Results of question 3)

As mentioned previously, the sample consists of four medical interpreters. The participants were asked about their working languages. Two (50%) answered that they work in Arabic, Spanish, and French languages, and the other two (50%) answered that they work in Spanish and Arabic languages. Since Arabic is the first official language in Algeria and French is the second official one, and Spanish is the first official language of the Cuban doctors working in the Algerian-Cuban hospital of Ouargla, medical interpreting in Spanish, Arabic, and French is needed in this hospital.

g. Work conditions

Results of questions 4 and 5: Working hours and days

During data gathering, the interpreters were asked about how many hours they work a day and how many days they work in a week. The entire sample (04) asserted that they work five days

a week. For the working hours, three (03) interpreters responded that they work eight hours a day, whereas one interpreter declared to work six hours a day.

It is found that almost all medical interpreters work five days a week for six to eight hours per day, which means that they spend around 30 to 40 hours weekly. Hence, this improves the experience and adaptation of the interpreters for the medical work environment.

III.2.1.2. Investigating the role of the medical interpreter

Results of Q 6: Is your work limited to interpreting medical encounters?
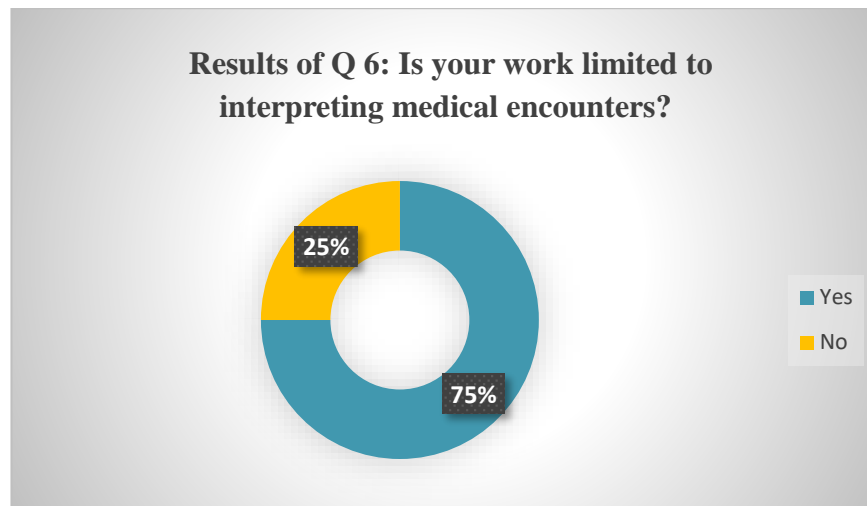
Figure 14: Responses of the limitation to the role of medical interpreter

Concerning the work limitations of medical interpreters, the findings represented in figure 8 show that 75% of medical interpreters at the Algerian-Cuban Eye Hospital of Ouargla see their role as merely interpreting in medical consultations. In comparison, 25% see that the role of the interpreter is more than that. In responding to that question, the participants of the study were asked to set other tasks if they replied "No". Therefore, the sample that represents 25% added that the interpreter can be a medical secretary or even a psychological assistant.

Results of question 7:

Roles	Transferring thoughts	Linguist	Cultural Broker	Humanitarian Broker
Numbers	02	01	01	04

Table 03: The role of medical interpreter

ROLE OF THE MEDICAL INTERPRETER

Transferring thoughts 25%

Humanitarian Broker 50%

Linguist 12%

Cultural Broker 13%
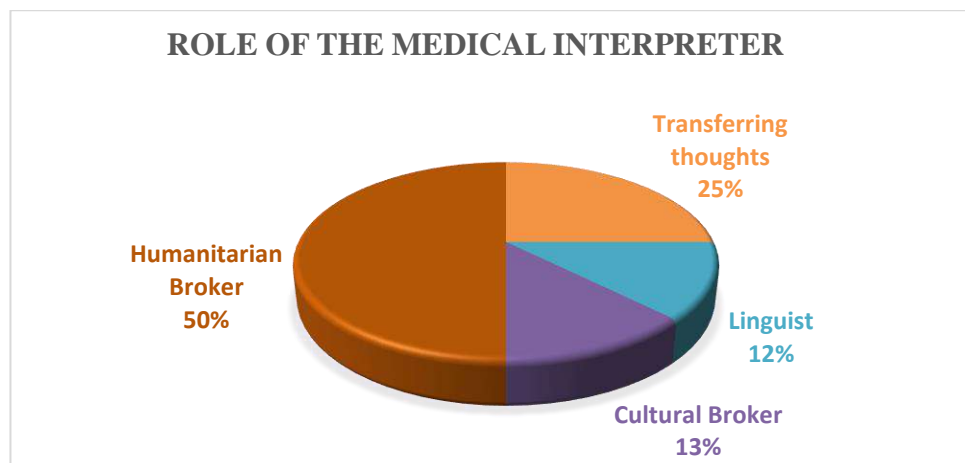
Figure 15: Responses to the role of the medical interpreter

As for the role of the medical interpreter, the previously mentioned sample of the present study was provided with four options without specifying the number of answers from which they had to choose. The results shown in the graph indicate that the respondents, with a total of 50%, believe that the main role of a medical interpreter is to be a humanitarian broker. Whereas 25% perceive his role as transfer-ring thoughts in healthcare communication between patient and physician. 13% of the participants believe that the role of the medical interpreter should be acting as a cultural broker, and 12% see him as a linguist.

Question 8: In the course of performing, medical interpreter should:

Options	Yes	No
Simplify medical terms for the patients	04	00
Summarise long and detailed utterances	04	00
Reduce the cultural gap and explain cultural difference between speakers	04	00
Total	**04/04**	**00**

Table 04: Responses to the performance role of medical interpreter

The presented Table 4 shows that the four medical interpreters believe that during the interpreting process, interpreters should simplify medical terms for patients and their families

and summarise lengthy and intricate utterances, as well as reduce the cultural gap and explain cultural differences between speakers (patient and healthcare provider). It can be concluded that the function of interpreters in such a setting de-pends on their ability to facilitate communication between the involved parties, thereby ensuring the accurate transmission of messages.

III.2.1.3. The frequent stressors for medical interpreters
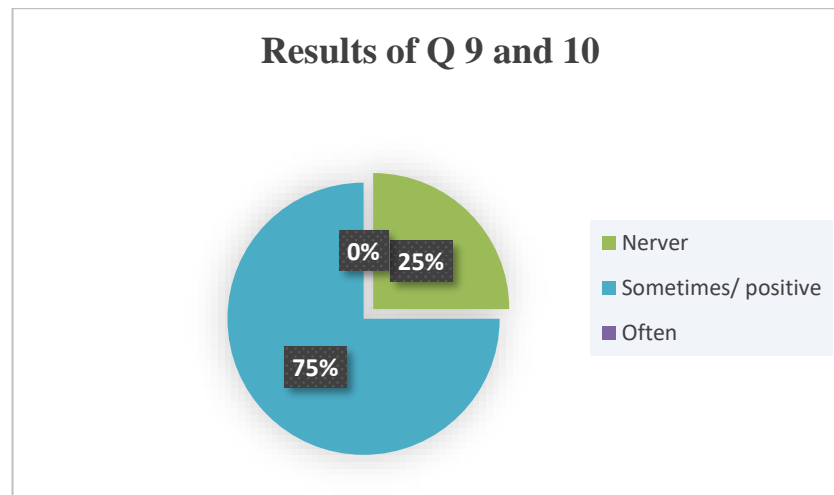
Figure 16: Responses to the effect of the medical consultation on the interpreter

The participants have been asked two consecutive questions (9 and 10) to illustrate the insights and impact of medical consultations on interpreters in the domain. As depicted in the above chart, the largest percentage of participants (75%) occasionally encounter psychological ramifications as a result of medical consultations. Moreover, one interpreter representing 25% reported that he was never affected. In connection with question (8), the same sample who answered "Sometimes", responded for question (9) that medical consultations had a positive effect. In essence, if stress is perceived as positive or eustress, it can serve as a source of motivation for interpreters to perform at their best.
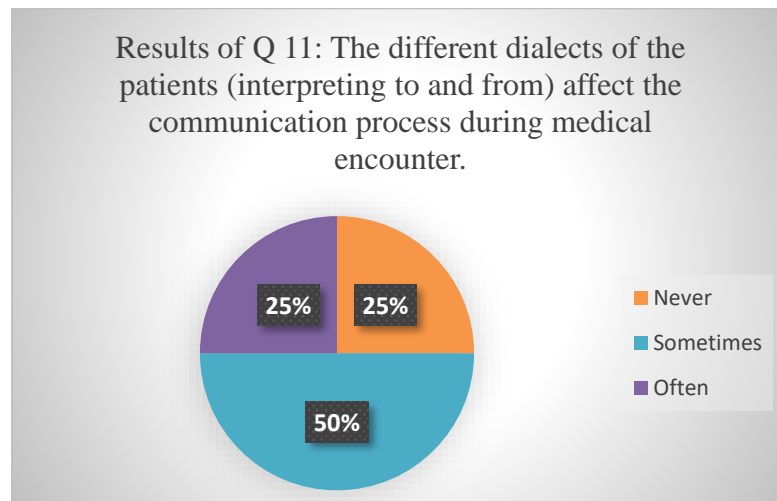
Figure 17: Responses to the effect of the patients' dialect on communication

This Figure shows that the half of participants (50%) replied that the differences of accents and dialects sometimes affect the communication during the medical encounter. Whereas the quarter of the total sample (25%) answered with "Often" and the other 25% believed that different accents and dialects never affects the interaction.

Figure18: Responses of the exposure of medical interpreter to stress

The above Figure presents the rate of respondents who believe that the medical interpreter is exposed to stress most of the time, which is 25%, while a total of 75% of the respondents answer that he is exposed to stress sometimes. Since none of the survey participants denied stress exposure, this emphasises the complex nature of the medical interpreting profession.
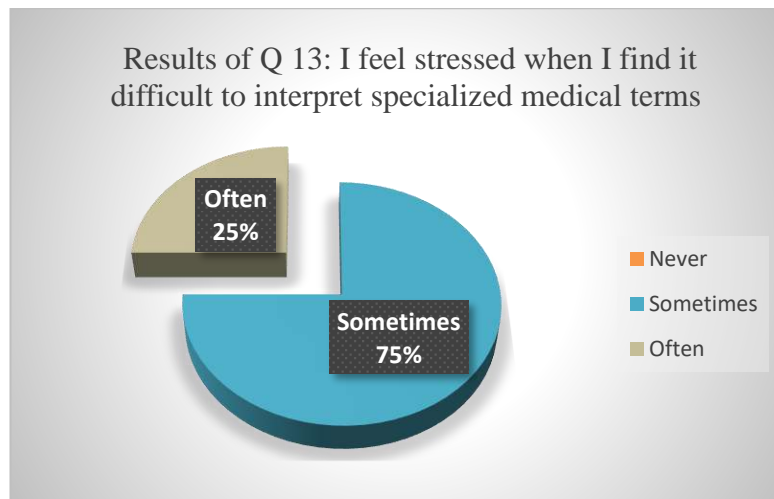
Figure 19: Responses to the impact of difficult medical terms in inducing stress

The depicted graph illustrates that the majority of respondents, representing 75% of the sample, sometimes experience stress when they find it difficult to interpret certain specific medical terminologies, including the interpreter who got trained. Meanwhile, one respondent, making up 25%, often feels stressed in such situations. It is concluded that despite training, medical interpreters are constantly facing difficulty in rendering the specific terms, which can be a source of stress for them.
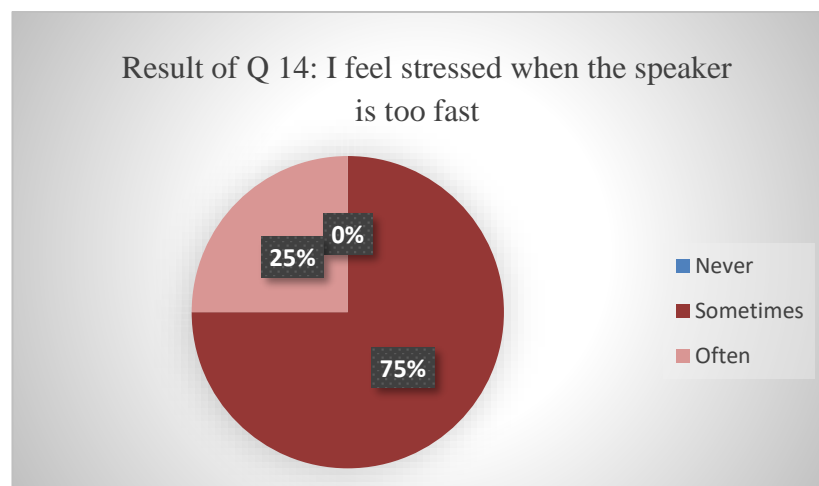
Figure 20: Responses to the challenge of fast speaking in inducing stress

The chart shows that 75% of the interpreters see hurried speech as a cause of stress for them "Sometimes", and the rest 25% indicate that fast speech may serve as a stress trigger most of the time. Furthermore, speaking speed can reduce the accuracy and quality of the interpreted

output, lead to the loss of some details, and affect the health of the patient due to an inability to understand the speaker. This, as a result, put the interpreter under pressure.
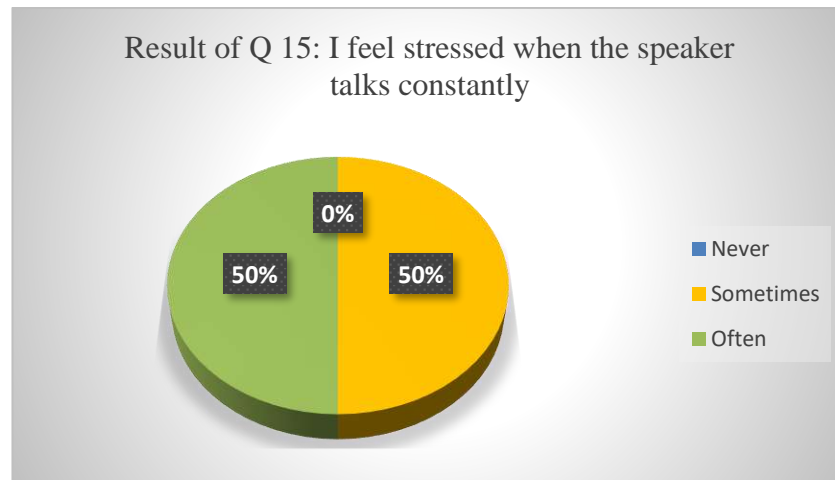
Figure 21: Responses to the contribution of continuous talking in stress

The above Figure presents the effect of constant talking on medical interpreters, where a total of 50% of the participants perceived that the continuous talking frequently contributed to stress. The other half of participants (50%) answered "Sometimes". Overall, speaking without a pause can affect the flow of communication, where the medical interpreter may lose his concentration because of poor ability in listening and speaking, and it is a threat mainly in interpreting important information such as symptoms of diseases, right diagnoses, and medicines. This challenge usually occurs when interpreting consecutively, leading to suboptimal interpretation quality.
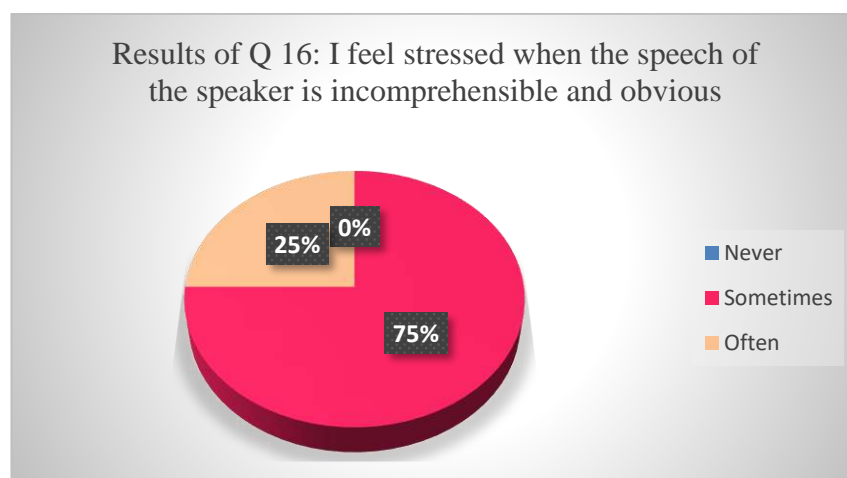
Figure 22: Responses to the contribution of the unclear utterance in stress

The collected responses in Figure 21 indicate that 75% of the surveyed interpreters report that unclear and ambiguous speech can sometimes be a stress factor. Conversely, one respondent representing 25% of the sample declares regularly experiencing stress as a result of difficulty comprehending the speaker. Hence, the unclear utterances which may be result due to the speaker's difficulties with pronunciation or voice, can affect the attitude of the medical interpreter and generate poor communication.
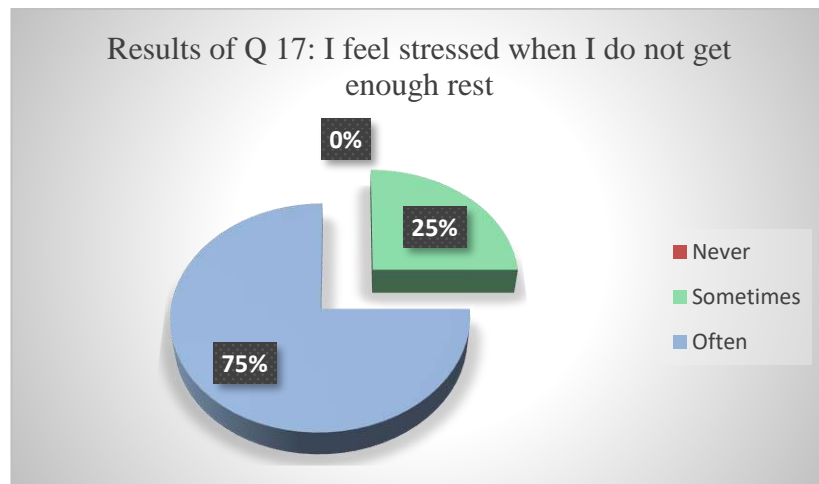
Figure 23: Responses to the contribution of the lack of enough rest to stress

Enough time for rest is important for any employer to recharge his energy, while the contrast can lead to stress. Concerning this issue, the participants in the current study were asked about the contribution of a lack of rest to inducing stress. Three interpreters, making up 75% of the sample, answered that they often feel stressed due to a lack of rest, and one interpreter, making up 25%, answered that he experiences it only sometimes. Therefore, it is suggested that adequate amounts of rest increase the alertness and cognitive function of medical interpreters and decrease their stressful encounters.
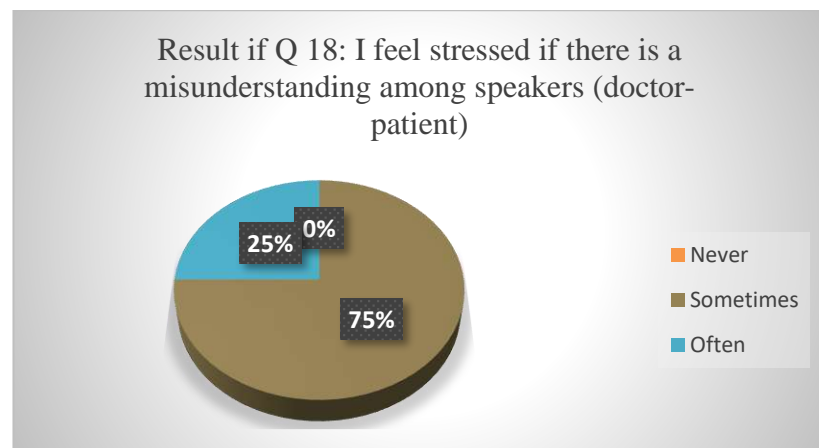
Figure 24: Responses to the impact of the misunderstanding between the speakers in stress

Since the interpreter is a part of the medical conversation he may be affected by its events. Though, the participated interpreters of the Algerian-Cuban eye hospital of Ouargla have been questioned whether they feel stressed in the case of arising a mis-understanding between the patients or their family members and doctors. The graph shows that most of respondents answered with "Sometimes" (75%), while the others answered with "Often" (25%). It is assumed that interpreters act impartially and accurately in communicating messages between relevant parties, following ethical standards in their work.
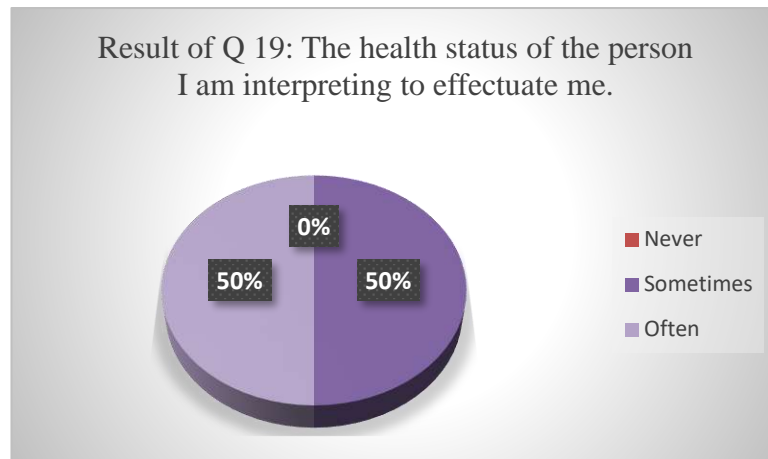
Figure 25: Responses to the effect of the health condition of the speaker on the interpreter's psyche

According to the chart provided, half of the respondents (50%) are frequently psychologically impacted by the health condition of the speaker, whereas the remaining 50% are occasionally influenced. This reflects the internal feelings that differ from one personality to another.
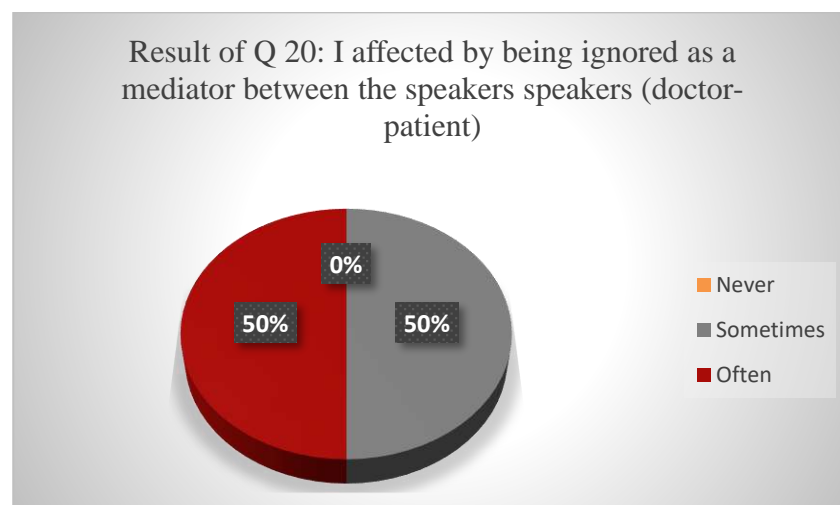
Figure 26: Responses to the effect of being disregarded by the speakers in stress

It is noticed from the provided pie chart data that two interpreters (50%) stated that they sometimes face stress due to disregarding their existence as mediators among the doctors and the patients. In the contrast, the two other interpreters (50%) replied that they often feel stressed because of neglecting their role in the medical interaction. To conclude, the findings demonstrate that self-imposing as a third part of the interaction is prioritised for the medical interpreters as professionals.
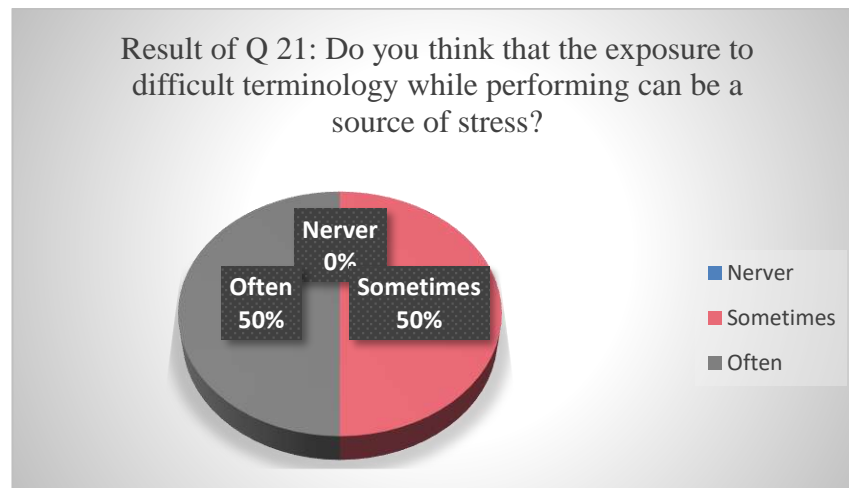
Figure 27: Responses to the feeling of stress in situations related to the difficulty of terminology

The present Figure depicts the impact of complex terminologies on evoking stress for interpreters. Fifty percent of the participants (50%) believe that experiencing situations related to difficult terms is stressful most of the time since they are interpreting in Ophthalmology, while the other half assert that it is stress-inducing sometimes. Medical interpreters may encounter instances where they are unable to interpret specific terminologies due to the frequent updates in the medical domain. This underscores the need to sustain sufficient knowledge of the important terms in medical specialties and subspecialties.

For more clarification, the interpreters have been asked an open-ended question.

Question 22: Are there other stressors for the medical interpreter? If yes, mention it.

Regarding this question, only two interpreters provided answers for their personal experiences with stress, yet the other two did not share their insights. R1 answered "Yes" and commented that the large number of patients, in addition to the absence of some interpreters, can cause him stress. This can be attributed to the workload and tiredness. R2 also answered "Yes" and expressed that the disruption of certain employees during a medical examination impedes his

work and induces a sense of stress. The obtained results demonstrate that the challenges encountered in the field of medical interpreting can vary among interpreters depending on the individual.

This section presents an examination of the factors that contribute to stress for healthcare interpreters. The responses to the survey questionnaire revealed that the frequency of experiencing stress was reflected in the responses "Sometimes" (27 times) and "Often" (20 times). Whereas the response "Never" was mentioned only twice with regard to the potential stressors encountered. Through these results, it can be inferred that the majority of medical interpreters at the Algerian-Cuban eye hospital are exposed to varying degrees of stress attributable to the aforementioned factors, which differ according to the character of each individual.
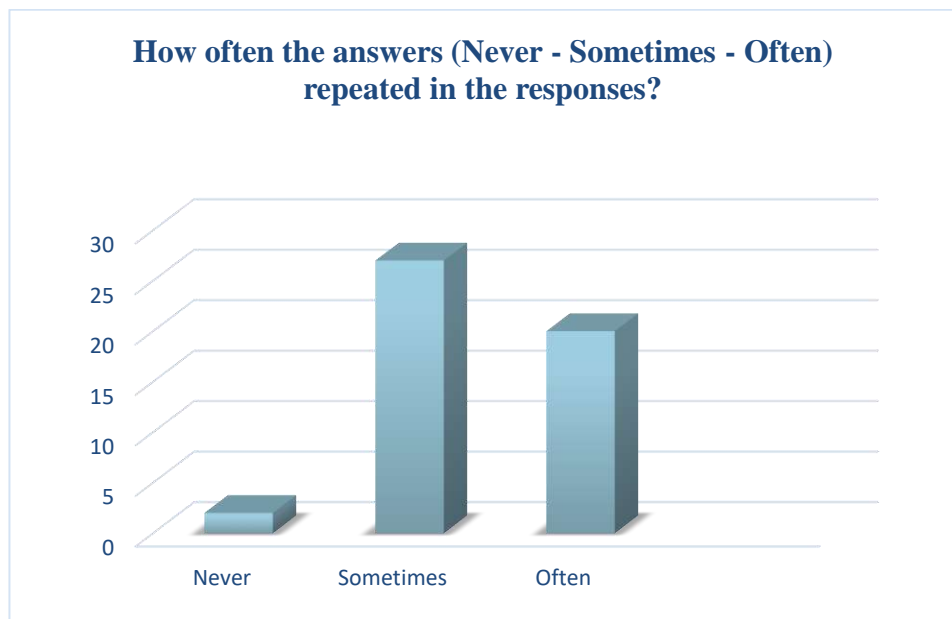
Figure 28: The rate of exposure to stress factors by the medical interpreters

III.2.1.4. Investigating the consequences of stress on the medical interpreters of Algerian-Cuban Eye Hospital of Ouargla
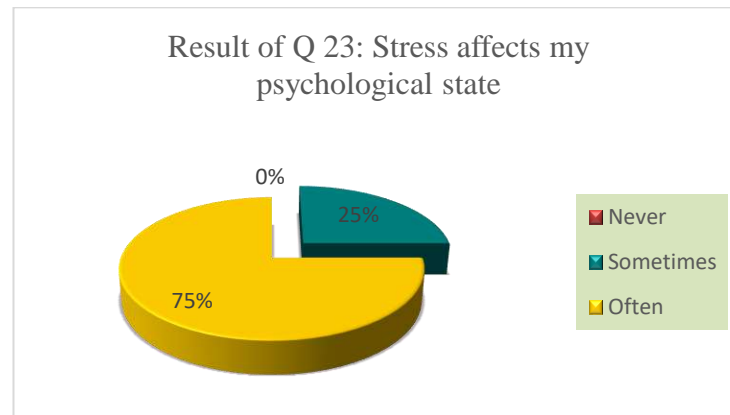
Figure 29: The effect of stress on the interpreter's psychology

The psychological stability of the medical interpreters is important to achieving optimal performance in the execution of their professional duties. The responses obtained from the study suggest that 75% of the total sample suffers regularly from psychological disorders due to stress. In contrast, the other 25% admit to the occasional effects of stress on their psychological health.
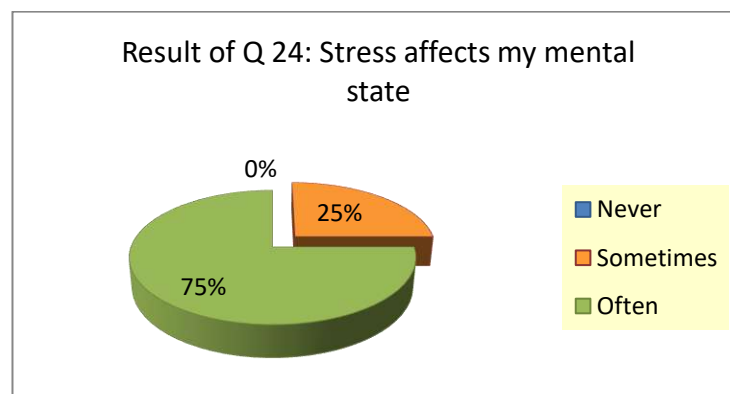
Figure 30: The effect of stress on the mental status of the medical interpreter

The pie chart shows that a significant proportion of study participants, namely 75%, experienced frequent mental distress due to stress, while 25% indicated occasional occurrences of such distress. This highlights the importance of maintaining a clear and focused mindset with

a high level of concentration while engaging in healthcare interpreting activities in order to ensure accurate and satisfactory interpretations.
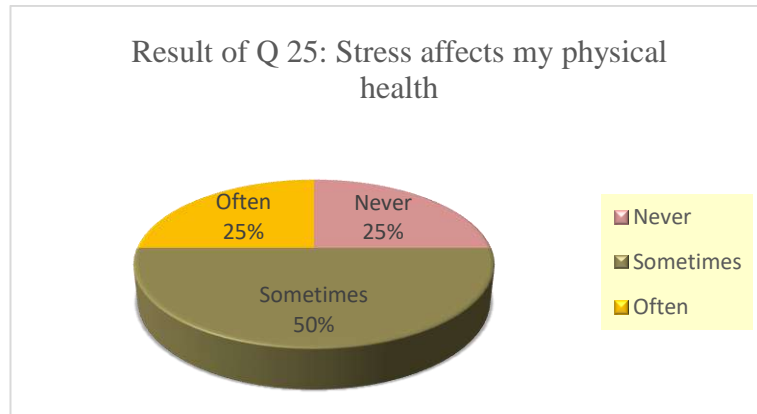
Figure 31: The effect of stress on the physical health of the medical interpreter

To detect the impact of stress on the physical health of interpreters working in healthcare settings, a cohort of participants was sampled. Two interpreters, making up 50% of the sample, reported that stress often had a physical impact on their well-being. The other half of the interpreters were equally divided between the two interpreters, the one who reported that stress affects him sometimes (25%), and the other who asserted no such impact at all.

Figure 32: The effect of stress on the quality of interpretation

Through the provided data in the above graph, it can be noticed that half of the participants in the study responded that stress influences the quality of rendered output most of the time. The other half of the group believed that interpreting quality is sometimes affected by stress. Based on that, it can be said that the main aim of the interpreter is to provide accurate interpretation to convey the direct meaning and con-tribute to the success of the medical encounter between

patient and healthcare provider, but in cases of stress, the rendition of the message can be poor, which in turn affects the whole interaction.

Results of Q 27: Based on your experience, describe a stressful situation you were exposed to that affected your workflow?

For more real-life stressful experiences, the participants were asked to provide cases where they fell under pressure. In response to the question, three participants provided their experiences. R1 said that one time he witnessed a patient having a heart attack in the waiting room. R2 described that one day during a consultation with a patient, a doctor entered and interrupted the communication, and then a conflict arose between him and that doctor. While R3 answered that usually the bad behaviours of the patients affect his workflow. It can be suggested that work conditions can really impact the way interpreters act.

This section determined the consequences of stress for medical interpreters of the Algerian-Cuban Eye Hospital of Ouargla. It investigated the psychological and physiological effects of stress on interpreters, as well as its influence on their mental status and the quality of interpretation, through in-depth analysis based on four closed-ended questions and one open-ended question. The results reveal that the majority of participants reported experiencing stress frequently or occasionally, with a total of ten respondents indicating "Often", five indicating "Sometimes", and only one participant responding with "Never". In conclusion, it is suggested that stress exerts a significant impact on the vast majority of medical interpreters in this in-situation.

How often the answers repeated?
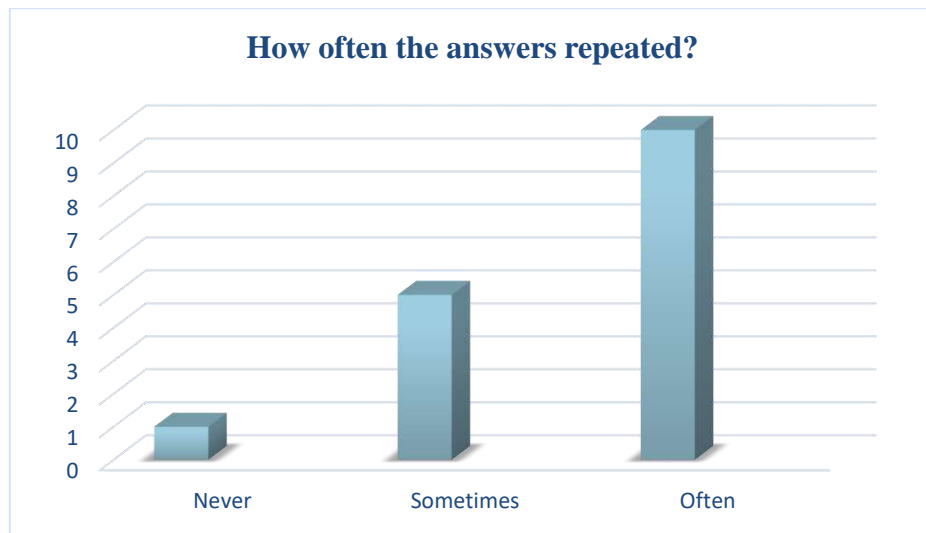
Figure 33: The rate of exposure to consequences of stress for medical interpreters

III.2.1.5. Strategies for managing stress

Results of question 28: In order to avoid being stressed, a medical interpreter have to:

Options	R1	R2	R3	R4
Be calm by practising relaxation techniques.	✓	✓	✓	✓
Avoid the stressors in his environment and adopt a healthy lifestyle.	✓	✓	✓	✓
Declare the difficulty of interpreting and request for repetition or explanation, if required.	✓			
Train continuously to enhance the interpreter's self-confidence.	✓	✓	✓	✓
Control his emotions to prevent the patient from transmitting negative feelings to him.	✓	✓	✓	✓

Table 05: Stress management strategies

In addition to exploring stressors and their impacts, the study respondents were presented with a multiple-answer question comprising five options to examine the strategies they employ to manage stress. The findings in Table 2 clarify that the group participants unanimously agreed

on the importance of implementing relaxation techniques, maintaining a healthy lifestyle while disregarding stress, consistently engaging in formation, and controlling emotions. Yet, only R1 selected the third strategy of requesting clarification when facing a difficult situation as a means of managing stress. So, there are a variety of coping strategies that healthcare interpreters can adopt to manage occupational stress.
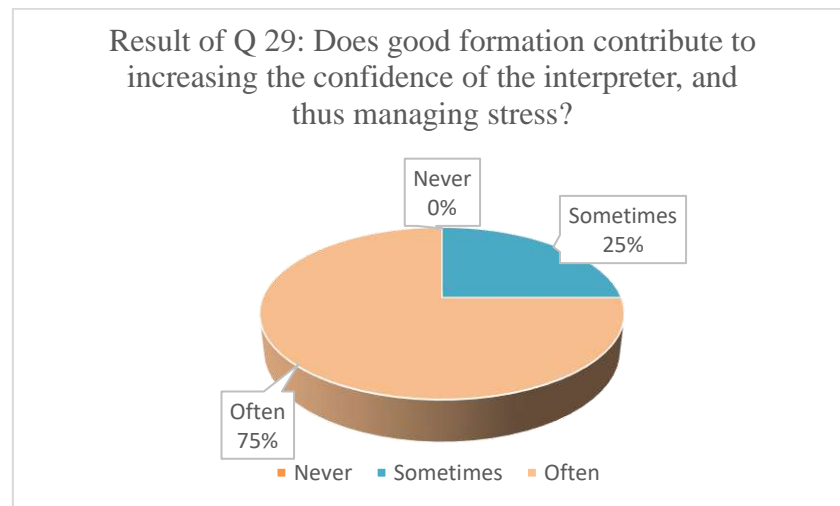
Figure 34: Responses of the impact of formation and self-confidence in controlling stress

In response to the question of the contribution of good formation to increasing the confidence of the interpreter and thus controlling stress, the pie chart data demonstrates that 75% of the interpreters, which represent three participants of the sample, find that good formation often aids in improving self-confidence and consequently managing stress, and 25% of the rest of the sample, which represents one interpreter, views that it is not often but only sometimes a contributor to confidence and stress control. None of the interpreters answered with "Never". Overall, it is concluded from the results of the above chart that there is a cause-and-effect relationship between training, self-confidence, and stress control, in which accurate and effective formation as a medical interpreter leads to higher self-confidence and, as a result, managing stress whenever encountered.
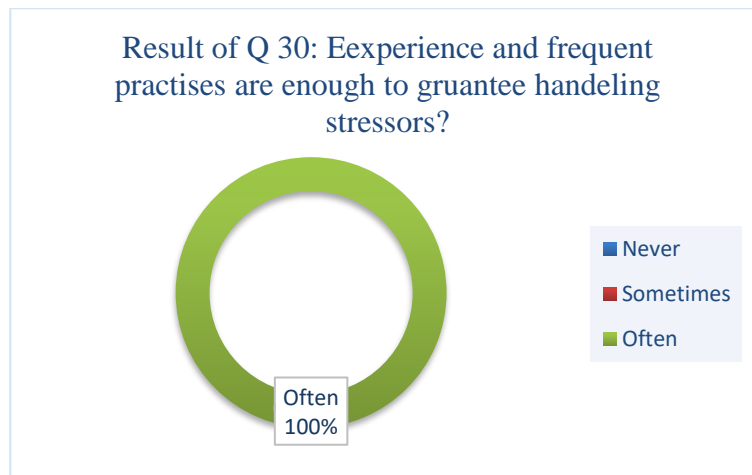
Figure 35: Responses of the role of professional experience in coping stress

As can be seen from the data in the graph above, all the medical interpreters (04) answered "Often" to the survey question and confirmed that sufficient experience and frequent practise can be an efficient way to cope with work-related stress. Adequate experience can only be obtained through engagement in training programmes designed to enhance the requisite skills for the interpretation process.

Question 31: Mention other techniques that may help manage stress that you may be exposed to.

Respondents were invited to provide additional stress management techniques that were not listed in the questionnaire. Two participants provided answers for that question. The first one stated that work commitment and exceptional holidays can be prominent coping techniques. The other one mentioned a good work atmosphere and shared the same insight as the first interpreter regarding the commitment of workers to work, commonly referred to as work ethic, in order to alleviate work-related stress through having a sense of responsibility to fulfil assigned tasks in the workplace. Thus, it is figured that individual medical interpreters possess distinct mechanisms for managing stress, which differ from one to another according to personal or interpersonal stressors.

This section investigated the findings of the problematic question of how the medical interpreters of the Algerian-Cuban Eye Hospital of Ouargla deal with occupational stress. The collected data demonstrated that multiple personal and interpersonal coping strategies, good

training, and professionalism play a significant role in managing stressful work conditions. In conclusion, to disconnect from stressful work constraints and improve job satisfaction, medical interpreters apply certain tailored problem-focused coping strategies to their requirements.

Conclusion

The present study has examined one of the most important occupations in recent years, which is medical interpreting, and treated the most crucial issue in the modern workplace, occupational stress.

Due to the demanding nature of medical interpreting as a profession, this research aimed to investigate the notion of stress in the profession through the identification of the reasons behind feeling stressed among the medical interpreters of the Algerian-Cuban Eye Hospital of Ouargla (case study) and its consequences on different levels, and to explore the adopted coping strategies by the interpreters to man-age stress and mitigate its effect on their workflow. The achievements of these objectives provide responses to the aforementioned research questions, with the cited hypotheses to confirm or deny.

This study has accentuated the importance of using a medical interpreter in bilingual healthcare communication, highlighting his vital multi-roles in healthcare settings and his contribution to the success of the medical encounter in connection to the challenges he may be exposed to, in order to ensure the best message rendition since it is a matter of life or death for the patient. Furthermore, the study confirmed the vast-reaching effects of stress on medical interpreters and exposed the factors that con-tribute to stress. Lastly, a set of strategies and solutions have been proposed to help the interpreter cope with such a mental disorder.

Examining such a fundamental topic led to the main findings concerning the training of the interpreters in the target hospital, which may as a result justify the amount of stress exposure for those interpreters in addition to its psychology, physiology, and mental status impact, hence the quality of medical interpretation. There are a number of strategies that medical interpreters adopt to manage stressful situations and over-come their vast-reaching effects, including a good work environment, effective training programmes, work commitment and preparation, relaxation techniques, a healthy lifestyle for work-life balance, and demands control.

This investigation has served to shed light on the reality of medical interpreting activity inside health care institutions and probe the factors and results behind stress for medical interpreters. Adding to this, the best undertaken solutions for managing stress levels and optimising work productivity.

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Appendix

وزارة التعليم العالي والبحث العلمي

جامعة قاصدي مرباح ورقلة

كلية الآداب واللغات

قسم الآداب واللغة الإنجليزية

استبيان حول تحكم الترجمان الطبي في التوتر (المؤسسة الاستشفائية لطب العيون صداقة الجزائر كوبا بورقلة نموذجا)

في إطار بحث علمي ميداني لمذكرة تخرج شهادة الماستر (تخصص ترجمة)، يشرفنا أن نضع بين أيديكم هذه الاستمارة، كما نرجو منكم التفضل بتعبئتها بما يتوافق مع رأيكم الشخصي وتجاربكم المهنية بكل دقة وأمانة.

يتعلق موضوع الاستمارة ب " كيفية التحكم في التوتر للمترجمين الطبيين بمستشفى طب العيون صداقة الجزائر كوبا بورقلة." المقصود بذلك الاستراتيجيات التي يتبناها المترجمين أثناء عملهم من أجل التحكم في التوتر المهني.

- **ملاحظة:** ستعامل إجاباتكم بسرية تامة ولن تستخدم إلا لأغراض البحث العلمي فقط.

السن: ....

الجنس: ....

الشهادة: ....

1). كم عدد السنوات التي قضيتها في وظيفة الترجمان الطبي؟

- من 0 الى 1 سنة
- من 2 الى 3 سنوات
- من 3 الى 5 سنوات
- أكثر من 5 سنوات

2). هل تلقيت تدريبا خاصا في مجال الترجمة الطبية؟

- نعم
- لا

3). ما هي اللغات التي تترجم منها وإليها؟

....

4). كم عدد ساعات عملك في اليوم؟

....

5). كم عدد أيام عملك خلال الأسبوع؟

....

دور الترجمان الطبي

6). هل يقتصر عملك على ترجمة المقابلات الطبية؟

- نعم
- لا

ـ إذا كانت لديك مهام أخرى اذكرها.

....

7). فيما يتمثل دور الترجمان الطبي بالنسبة لك؟

- نقل أفكار المتحدثين من لغة إلى أخرى.
- خبير لغوي.
- وسيط ثقافي.
- وسيط انساني.

8). في رأيك هل يجب على الترجمان الطبي أثناء عمله أن:

- يقوم بتبسيط المصطلحات الطبية للمريض.   نعم / لا

- يلخص الحديث إذا كان طويلا ومفصلا.   نعم / لا

- يقوم بتقليص الفجوة الثقافية بين المتحدثين ويشرح الاختلاف الثقافي.   نعم / لا

أسباب التوتر

9). هل تعتقد أن الترجمان الطبي يتأثر نفسيا بالمقابلة الطبية؟

- أبدا
- أحيانا
- غالبا

10). إذا كان المترجم الطبي يتأثر بالمقابلة الطبية، فهل هو تأثر:

- إيجابي
- سلبي

11). هل يؤثر اختلاف لهجة المرضى المترجم لهم وعنهم على عملية التواصل أثناء المقابلات الطبية؟

- أبدا
- أحيانا
- غالبا

12). هل تعتقد أن الترجمان الطبي معرض للإصابة بالتوتر باعتبار أن الترجمة الفورية عمل مرهق؟

- أبدا
- أحيانا
- غالبا

13). أشعر بالتوتر حينما أجد صعوبة في ترجمة المصطلحات الطبية المتخصصة.

- أبدا
- أحيانا
- غالبا

14). أشعر بالتوتر حينما يكون المتحدث سريعا في كلامه.

- أبدا
- أحيانا
- غالبا
-

15). أشعر بالتوتر حينما لا يتوقف المتحدث عن التكلم.

- أبدا
- أحيانا
- غالبا

16). أشعر بالتوتر حينما يكون كلام المتحدث غير مفهوم وواضح.

- أبدا
- أحيانا
- غالبا

17). أشعر بالتوتر إذا لم آخذ قسطا كافيا من الراحة.

- أبدا
- أحيانا
- غالبا

18). أشعر بالتوتر إذا حدث سوء فهم بين المتحدثين (الطبيب – المريض).

- أبدا
- أحيانا
- غالبا

19). تتأثر نفسيتي بالوضع الصحي للذي أترجم له وعنه.

- أبدا
- أحيانا
- غالبا

20). تتأثر نفسيتي لتجاهل وجودي كوسيط بين المتحدثين (الطبيب – المريض).

- أبدا
- أحيانا
- غالبا

21). هل ترى أن التعرض لمواقف تخص صعوبة المصطلحات مصدر للإحساس بالتوتر أثناء أداء العمل.

- أبدا
- أحيانا
- غالبا

22). هل هناك عوامل أخرى مسببة للتوتر لدى الترجمان الطبي؟ أذكرها.

....

....

نتائج التوتر

23). يؤثر التوتر على حالتي النفسية.

- أبدا
- أحيانا
- غالبا

24). يؤثر التوتر على حالتي العقلية.

- أبدا
- أحيانا
- غالبا

25). يؤثر التوتر على صحتي الجسدية.

- أبدا
- أحيانا
- غالبا

26). يؤثر التوتر على جودة الترجمة الطبية.

- أبدا
- أحيانا
- غالبا

(27). انطلاقا من تجربتك، اذكر حالة تعرضت فيها للتوتر مما أثر على سير عملك؟

....

....

....

<div align="center">

استراتيجيات التحكم في التوتر

</div>

(28). لكي يتجنب الترجمان الطبي التعرض للتوتر عليه بـ:

- تهدئة أعصابه من خلال ممارسة تقنيات الاسترخاء.
- الابتعاد عن مسببات القلق في محيطه واتباع أسلوب حياة صحي.
- التصريح بصعوبة الترجمة وطلب الإعادة أو الشرح إذا تطلب ذلك.
- التكوين المستمر لتعزيز المترجم ثقته بنفسه.
- تحكم الترجمان الطبي في انفعالاته ليمنع انتقال   المشاعر السلبية المريض اليه.

(29). أذكر طرقا أخرى ترى انها تساهم في التحكم في التوتر الذي قد تتعرض له.

....

....

(30). يساهم التكوين الجيد في رفع ثقة المترجم بنفسه وبالتالي التحكم في التوتر.

- أبدا
- أحيانا
- غالبا

(31). التجربة والخبرة كفيلان للتغلب على العوامل المسببة للتوتر.

- أبدا
- أحيانا
- غالبا

The English version of the questionnaire:

MINISTRY OF HIGHER EDUCATION AN SIENTIFIC RESEARCH
KASDI MERBAH UNIVERSITY –OUARGLA-

Faculty of Letters and English Language
Department of English Language and letters

Questionnaire about: Stress management for medical interpreters
(The case study of the Algerian-Cuban Eye Hospital of Ouargla)

In the context of academic research for master degree in speciality of translation, we are horned to put this questionnaire in your hands, as we ask you kindly to fill it accurately, honestly and in accordance with your personal opinion and professional experiences.

The topic of the questionnaire is about stress management for medical interpreters in the Algerian-Cuban Eyes Hospital of Ouargla, which means the adopted strategies by the medical interpreter during their work in order to manage the occupational stress.

Note: your answers will be treated confidentially and will be only used for scientific research purposes.

Age: ....
Sex: ....
Certificate: ....

1). How many years have been you working as a medical interpreter?

- From 0 to 1 year
- From 2 to 3 year
- From 3 to 5 year
- More than 5 years

2). Have you received a special training in medical interpreting?

- Yes
- No

3). What languages do you interpret form and into?

....

4). How many hours you work per day?

....

5). How many days you work a week?

....…………

The role of the medical interpreter

6). Is your work limited to interpreting medical encounters?

- Yes
- No

If you have other tasks, mention it.

....

7). What is the role of the medical interpreter in your opinion?

- Transferring thoughts of the speaker from one language to another.
- Linguist.
- Cultural broker.
- Humanitarian broker.

8). In the course of performing, a medical interpreter should:
- Simplify medical terms for the patients.
- Summarize long and detailed utterances.
- Reduce the cultural gap and explain the cultural difference between the speakers.

The causes of stress

9). Do you think that the medical interpreter affected psychologically by the medical encounter?
- Never
- Sometimes
- Often

10). If the interpreter is affected by the medical encounter, is it a:
- Positive effect
- Negative effect

11). The different dialects of the patients (interpreting to and from) affect the communication process during the medical encounter?
- Never
- Sometimes
- Often

12). Do you think that a medical interpreter is exposed to stress, given the stressful nature of the interpretation profession?
- Never
- Sometimes
- Often

13). I feel stressed when I find it difficult to interpret specialized medical terms.
- Never

- Sometimes
- Often

14). I feel stressed when the speaker is too fast.

- Never
- Sometimes
- Often

15). I feel stressed when the speaker talks constantly.

- Never
- Sometimes
- Often

16). I feel stressed when the speech is incomprehensible and unclear.

- Never
- Sometimes
- Often

17). I feel stressed when I do not get enough rest.

- Never
- Sometimes
- Often

18). I feel stressed if there is a misunderstanding among the speakers (doctor – patient).

- Never
- Sometimes
- Often

19). The health status of the person I am interpreted for effectuate me.

- Never
- Sometimes
- Often

20). I affected by being ignored as a mediator between the speakers (doctor – patient).

- Never
- Sometimes
- Often

21). Do you think that the exposure to difficult terminology while performing can be a source of stress?

- Never
- Sometimes
- Often

22). Are there other stressors for the medical interpreter? If yes, mention it

....

....

....

<div style="text-align:center">

The consequences of stress

</div>

23). Stress affects my psychological state.

- Never
- Sometimes
- Often

24). Stress affects my mental state.

- Never
- Sometimes
- Often

25). Stress affects my physical health.

- Never
- Sometimes
- Often

26). Stress affects the interpretation quality.

- Never
- Sometimes
- Often

27). Based on your experience, describe a stressful situation you were expose to and affected your workflow?

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

> *Stress management strategies*

28). In order to avoid being stressed, a medical interpreter have to:
- Be calm by practising relaxation techniques.
- Adapt a healthy lifestyle and avoid the sources of stress in his environment.
- Declare the difficulty of the interpreting and request for repetition or explanation, if required.
- Train continuously to enhance the translator's self-confidence.
- Control his emotions to prevent the patient from transmitting negative feelings to him.

29). Does a good formation contribute to increasing the self-confidence of the interpreter, and thus managing stress?
- Never
- Sometimes
- Often

30). Experience and frequent practise are enough to guarantee handling stressors.
- Never
- Sometimes

- Often

31). Mention other techniques that may help to manage stress that you may expose to.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………….