

**The Most Adopted Methods
in Translating English
Medical Terminologies into Arabic**

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Abstract

The current research is dedicated to identifying the most adopted translation methods in translating English medical terminologies into Arabic and exploring their frequencies of occurrence. The unit of analysis is the English medical terminologies and their Arabic translated versions extracted from the scripts of the highest rating episodes of five of the highest rating English medical series. The theoretical framework took its basis on Yaseen's (2015) categorization of the medical translation methods. The results revealed that all the four translation methods were adopted in translating the English medical terminologies into Arabic: literal translation, transliteration, Arabization, and descriptive translation. The results further revealed that the literal translation method was the most adopted, followed by the descriptive translation method, the transliteration method, and the Arabization method. Finally, it is concluded from the results that the nature of the medical genre generally and the medical terminologies specifically had a significant influence in terms of the most adopted translation method since medical terminologies are considered specialized in nature; they require a method that renders their meanings in the most precise manner possible.

Keywords: Medical Terminologies, Translation Methods, Translation.

أكثر الطرق اعتماداً في ترجمة المصطلحات الطبية الإنجليزية إلى اللغة العربية

المستخلص

ان البحث الحالي مختص بتحديد طرق الترجمة الأكثر اعتماداً في ترجمة المصطلحات الطبية الإنجليزية إلى اللغة العربية واستكشاف تكرار حدوثها. ان وحدة التحليل هي المصطلحات الطبية الإنجليزية وترجمتها العربية المستخرجة من نصوص الحلقات الأعلى تصنيفاً لخمس من المسلسلات الطبية الإنجليزية الأعلى تصنيفاً. اتخذ الإطار النظري أساسه اعتماداً على تصنيف ياسين (2015) لطرق الترجمة الطبية. قد كشفت النتائج أن جميع طرق الترجمة الأربعة قد تم اعتمادها في ترجمة المصطلحات الطبية الإنجليزية إلى العربية: الترجمة الحرفية، النقحرة، التعريب، والترجمة الوصفية. كما أظهرت النتائج أن طريقة الترجمة الحرفية كانت الأكثر اعتماداً، تليها طريقة الترجمة الوصفية، وطريقة النقحرة، وطريقة التعريب. أخيراً، تبين من النتائج أن طبيعة اللغة الطبية بصورة عامة والمصطلحات الطبية على وجه التحديد كان لها تأثير كبير من حيث اعتماد طريقة الترجمة لأن المصطلحات الطبية تعتبر متخصصة بطبيعتها؛ حيث إنها تتطلب طريقة تعرض معانيها بأدق طريقة ممكنة.

الكلمات الدلالية: المصطلحات الطبية، طرق الترجمة، الترجمة.

1. Introduction

English is considered the predominant language of international communication in medicine, science, and technology. It is the contemporaneous lingua franca used by academics and researchers worldwide, especially for those whose English is not their native language (Taavitsainen, 2006). Latin held this spot for several centuries and was considered the international medium of communication in the Western world. However, Taavitsainen (2006) adds that most scientific and medical texts written in Latin were initially translated from Arabic and Greek. According to Bennett (2018), in the 14th and 15th centuries, vernacular languages like German, Portuguese and French were used as a tool to translate Latin scientific and medical texts. In the 17th century, the situation started to shift since scientists began to publish their articles and works in both Latin and English. While in the early 20th century, German, French and English competed for the spot of the medical lingua franca. English defeated its competitors with the support of the rising effect of *Anglo-American* culture over the globe (ibid). Meantime, the majority of medical articles and work are written in English in order to be internationally recognized. Articles of researchers whose English is not their first language are required and demanded to be written in English. This is a fact since domestic biomedical journals published in a specific country or academy are mainly required to be written in English to be published.

Maher (1986) believes that English language seems to be growing as an intranational and international currency in medical communication. According to Maher, this tendency might hold negative influences on medical discourse. He believes that using English language “may potentially inhibit communication between doctor and patients in a non-English-speaking environment and reinforce the inherent power relation, enhance professional or group identity, and promote the mystification of specialized knowledge” (p. 207). However, Bennett (2018) mentions that Latin has not entirely been extinct in the field of modern medical writing. Its traces are still found, for instance, the names of organs and their specific parts (e.g., *caput laterale musculi gastrocnemii* meaning the lateral head of gastrocnemius muscle). Latin planted its roots at the morphological level. Several stems, prefixes, and suffixes are still constructed in the process of forming medical terminology: e.g., the stem

hist- as in *histology* (the study of tissues), the prefix ex- as in *exhalation* (breathe out), or the suffix -itis as in *hepatitis* (inflammation of the liver).

The present research was conducted to examine the most adopted translation methods in translating English medical terminologies into Arabic. There are several studies that search in the area of medical and scientific terminologies with the translation issues related to these terminologies. However, this study specifically investigates the methods adopted by the translators in translating medical terminologies to explore which method is commonly adopted.

2. Medical Terminologies

Medical terminology is defined as “the study of words used to communicate facts and ideas particular to medicine; it is chiefly concerned with the present use and meaning of such words” (Davies, 1985, p. 13). Gharsa (2015) states that medical terminology deals with the words, abbreviations, acronyms, and compounds in the field of medicine. He classifies medical terminologies based on their origin to be put under three categories:

- a) Terms taken from the ordinary English vocabulary, such as blood count.
- b) Terms taken from a foreign language other than English like amputation.
- c) Terms that represent the names of discoveries and inventions as in Panadol.

Gharsa (2015) mentions that English language is known to have a large number of words that are taken from another language, known as *loanwords*; these words are often spelt the same or with a bit of change. English-English dictionaries are the primary source that is loaded with medical terminologies; the vast majority of them are taken from Greek or Latin. Starting with Greek, the words are not changed nor modified, such as *iris*, *stigma*, *helix* and *thorax*. While Latin words mainly include the words that are used in the anatomy of human body parts like the *pelvis*, *cerebrum* and *cornea*. Words that are adopted from both Latin and Greek conserved their original intended meanings (ibid).

Albin (1999) states that Greek is the language used for pathology, while Latin is the language used for anatomical nomenclature. Davies

(1985) expresses his belief that most medical terms are related to Greek; he further states that the reason behind believing that is due to Greek physicians in the ancient times, in this regard it is worthy of mentioning Hippocrates (born circa 460 BC on the island of Cos) who was the first physician to invent and develop scientific approaches to the medical field.

According to John (2005), when the Latin language died out and was no longer spoken, the scientific and medical terms taken from Latin survived and withstood the erosion and semantic drift. Due to the development in science and technology, the scientific and medical terms invented since the climax of the Latin and Greek terminology required newness in inventing new terms to fit the stances of modern inventions, discoveries, and concepts. For example, if we consider the word *internet*, it is not of Latin or Greek origin. This word was coined due to the invention of the internet.

3. Word Formation of Medical Terminologies

The vast majority of English medical terminologies are constructed from prefixes, roots, and suffixes. Newmark (1988) suggests two types of scientific and medical terminologies, namely professional and academic. He classifies three categories of English medical terminology based on medical vocabulary, which are the following:

1. Professional terminologies used by experts. For instance, *epidemic parotitis*: التهاب الغدة النكفية الوبائي
2. Academic terminologies that are Greek and Latin, used in academic research. For example, *phlegmasia alba dolens*: جلطات دموية في الوريد
3. Layman's or popular vocabulary used in everyday communication. For instance, *scarlet fever*: الحمى القرمزية

The word formation of most medical terminologies consists of one or more morphemes or word parts. These parts are prefixes, roots, and suffixes. These parts are often Latin or Greek. Medical terminologies have one or more of the following categories:

3.1 The Prefix

The prefix is the first part of the term. It is located at the beginning of the word, as in *anti-body*. Medical prefixes are in most cases derived from Greek and Latin words (Hutton, 2002). Plag (2003) states that

prefixes can generally be attached to verbs, nouns and adjectives. Each prefix has a specific meaning, for instance, *anti* means against. Prefixes normally add to, modify or change the meaning of the term. For instance, the prefix *ab-* which means from, away from, when added to a word such as normal, will change the meaning of the word. Normal becomes abnormal, which is the opposite of normal. Table 1 presents examples of prefixes:

Table 1

Examples of Prefixes in Medical Terminology

Prefix	Meaning	Examples
A-, An-	Without/ Lacking	Anemia
Anti-	Against	Anticholinergic drugs
Fibr/o-	Fiber	Fibrosis

1. Anemia is “a condition in which the number of red blood cells or hemoglobin is deficient”. (Betts, et al., 2013)
2. Anticholinergic drugs are “drugs that inhibit the release of acetylcholine (ACh)”. (Betts, et al., 2013)
3. Fibrosis is “a process in which muscle fibers are replaced by scar tissue”. (Betts, et al., 2013)

3.2 The Root

The root is the middle and main part of the medical terminology and it holds the main meaning. Hutton (2006) defines the roots as “basic medical words. More are derived from early Greek and Roman (Latin) words. Others have their origins in Arabic, Anglo-Saxon and German” (p. 2). For instance, the main root in the word *electrocardiogram* meaning *تخطيط القلب الكهربائي*, is *cardio* meaning heart. The root is in the middle surrounded by the prefix *electro-*, and the suffix *-gram*.

3.3 The Suffix

The suffix is located at the end of a word to give it a new meaning. A suffix may indicate whether the term is a noun or an adjective (Cohen, 2007). For instance, the suffix *-logy*, the study of, is added to the word root *laryng*, which means *larynx*; it forms the term *laryngology*, which means the study of the treatments and causes of disorders of the larynx (Mosby's Medical, Nursing and Allied Health Dictionary, 1998). Each

suffix has a specific meaning. For instance, the suffix *-ectomy* means a cutting out, and *emia* refers to a blood condition. Understanding the meaning of each suffix helps to understand the meaning of the whole word. Table 2 provides examples of suffixes.

Table 2

Examples of Suffixes in Medical Terminology

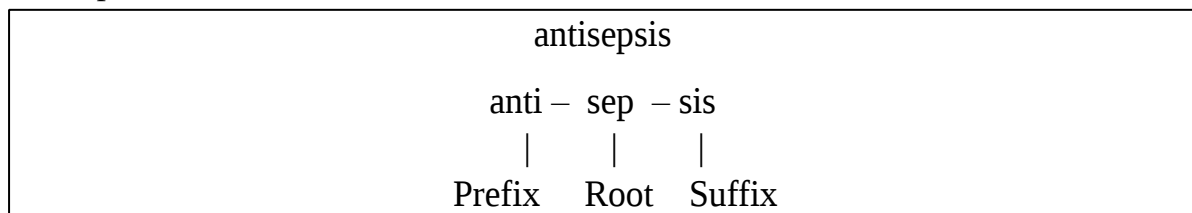
Suffix	Meaning	Examples
-ac	Pertaining to	Cardiac
-ia	Condition	Hemophilia
-oma	Tumor	Angiosarcoma

1. Cardiac means “having to do with the heart”. (National Cancer Institute, n.d.)
2. Hemophilia is “a group of related disorders in which there is the inadequate production of functional amounts of one or more clotting factors”. (Betts, et al., 2013)
3. Angiosarcoma is “a type of cancer that begins in the cells that line blood vessels or lymph vessels”. (National Cancer Institute, n.d.)

Several medical terms, in their constructions, have both a suffix and a prefix surrounding the root, an example of this case is *antisepsis*, meaning against infection. It contains the prefix *anti-*, the suffix *-sis*, and the root *sep*, which is derived from the Greek word *sepein*, meaning putrefaction.

Figure 1

Antisepsis Word Construction



Medicine includes all types of medical drugs, procedures, diseases, and equipment. Translating medical terms is considered crucial in the process of medical translation of any text of a medical product. Montalt and Gonzalez (2007), in this regard, state that in medical translation, much time is spent, and great efforts are invested in searching and solving the terminological issues.

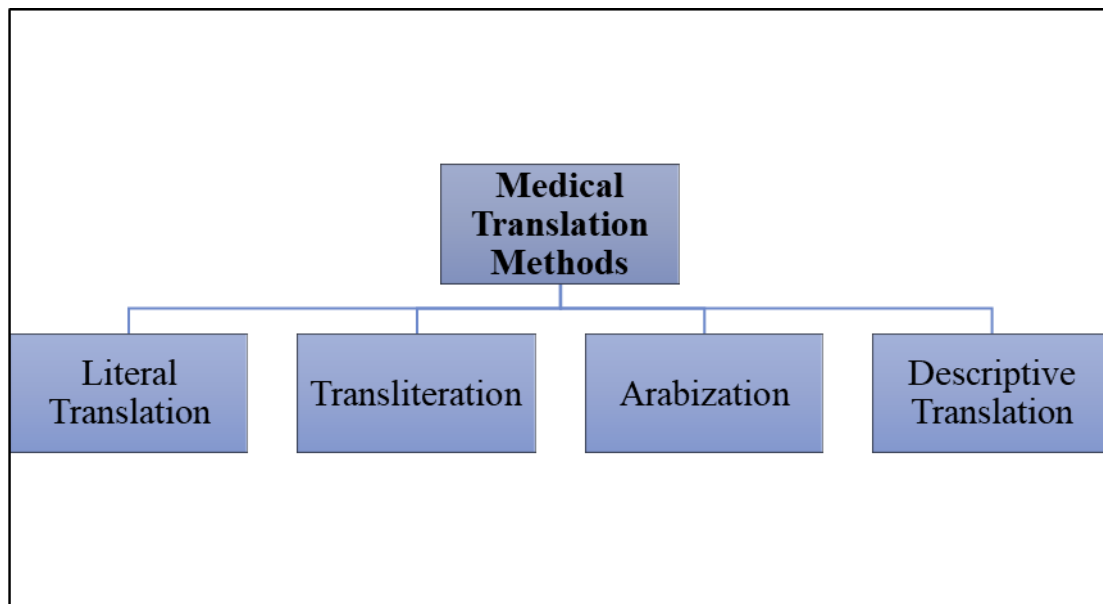
4. Medical Translation Methods

Since the world is in a constant state of scientific development, there is a significant need to have Arabic equivalent names for English new inventions, discoveries, and findings to keep Arab knowledge seekers and researchers updated. Arab terminologists and translators work together to seek ways to produce equivalents for each English medical or scientific term. According to Yaseen (2015), the medical field in the Arabic region is known to be governed by the English language, there is a great need to have Arabic translations for English terminologies. Colleges of Medicine, institutions, and academies related to the medical field in the Arab world all use English or French for studying and learning. Consequently, the medical practice, prescriptions, progress reports, medical diagnoses, etc., are all provided in English or French and not in Arabic. Therefore, it is crucial to have Arabic translations for English terminologies.

Yaseen (2015) explains that Arab terminologists, translators, and lexicographers made many attempts to find suitable Arabic translation equivalents for the medical and scientific terminologies that were initially coined in foreign languages. In this case, Arabic will not be neglected and left behind. Institutions conduct many efforts to create methods and techniques to solve the issue of translation and Arabization. Arabic translators use the following four methods to translate English medical and scientific terms into Arabic:

Figure 2

Medical Translation Methods



4.1 Literal Translation Method

Within the borders of this study, literal translation in its simplest form is replacing an English word with its equivalent in Arabic. The idea is mainly having the same meaning indicated in both languages. According to a study by Argeg (2015), English-Arabic dictionaries and glossaries such as Babylon's Medical Dictionary (2004), Hitti's Medical Dictionary (1997), and The Unified Medical Dictionary (UMD) (2009) have a significant number of medical terms that are translated literally, which is not wrong since it might present an acceptable translation, especially in the translation of medical terminologies constructed of only one word such as cancer: سرطان, disease: مرض, clinic: عيادة, etc. Al-Quran (2011) agrees with this concept by saying that concerning the translation of scientific terminology into Arabic, generally, classical Arabic prefers a single-word equivalent over a two-word equivalent as much as possible due to the root pattern system nature of the Arabic language, which tends to be derivative and attributive. Literal translation is commonly used in scientific translation generally and medical translation specifically. Cardos de Camargo (cited in Cronin, 2003) agrees and says that “literal translation is actually one of the most frequently used translation methods in technical texts” (p. 119). Cronin (2003) argues that literal translation method can also be beneficial in the translation of medical collocations, abbreviations, and compounds, as shown in table 3 below.

Table 3

Examples of medical collocations, abbreviations, and compounds

Medical terms	Literal translation	Type
Cardio-pulmo-nary diseases	امراض القلب	Compounds
Tolerate pain	يتحمل الألم	Collocations
ENT department	قسم الأنف والأذن والحنجرة	Abbreviations
Lung diseases	امراض الرئة	Normal

In contrast, there are several cases where literal translation is not a suitable method for translating medical terms into Arabic. For instance, *hay fever* is literally translated into حمى القش. The reason for the name of this fever is due to the allergy that affects people during the harvest season of hay which takes place in the spring season of every year. However, the accurate translation for hay fever is حساسية الربيع and not حمى.

القش since the allergies and fevers in spring are not caused explicitly by hay. There are several factors causing hay fever besides hay, such as pollen and dust mites. If حساسية الربيع was back-translated literally, it would be spring allergy and not hay fever. حساسية الربيع is only called by this name due to its prevalence in the spring season. However, both hay fever and حساسية الربيع are equivalents despite the change in translation. Therefore, literal translation in such cases is not the best option.

The systemic differences between Arabic and English are essential in choosing the proper technique and method in medical translation. The literal translation method basically operates by transmitting medical terms into Arabic, considering that these terms already exist in Arabic and hold the exact meaning found in English. In this method, only words that already exist in Arabic are used.

4.2 Transliteration Method

Based on the Compact Oxford English Dictionary (2008), transliteration means rewriting a word by utilizing the closest corresponding letters of a different language or alphabet. In other words, it is the phonetic transcription from the SL of a word by utilizing a differing script. Simply, it is a letter for letter exchange. According to Yaseen (2015), some scientific and medical words in their transliterated form are widely spread among ordinary people and have become an integrated part of their general knowledge; such transliterated terms are used in regular everyday communication, which leads to the transliteration method being used much often. This led to the general thought that these terms are now considered as a part of the Language for General Purposes (LGP) more than being medical in nature. For instance, the words: Colon: قولون, Herpes: الهربس, AIDS: الايدز, Malaria: مالاريا, Bacteria: بكتريا, Bilharzia: بلهارزيا, Vitamin: فيتامين, Aspirin: اسبرين and Coronavirus: فيروس كورونا or Covid-19: كوفيد-19.

Linguists differ in their opinions. Matlub (1983) supports transliteration method and says that it is beneficial and sometimes necessary, especially with foreign names, items, and labels in pharmacies. In contrast, Ghazalla (1995) disagrees by calling this method the worst and poorest method in translation; he describes it as a means for foreign words to invade Arabic. Thus, he suggests that translators must avoid this method. Nevertheless, there are always some exceptions; consider the

following two cases describing the exception according to Ghazalla (1995):

- The first case is when there is not yet an Arabic equivalent for the foreign word, for instance, Ion, ايون, Hormones هرمونات, Hallucination هلوسات and Enzyme انزيم. The method of transliteration can be used until they are given Arabic equivalents. For instance: Plasma: مصل and Influenza: انفلونزا/ النزلة الوافدة.
- The second case is when the foreign names are of inventions or discoveries, for instance, the name of the medical drug or brand Panadol بنادول, Tylenol: تايلنول, Calpol, كالبول, Acamol: اكاملول, Adol: اداول, and Vitamol: فيتاملول.

Pinchuck (1977) discusses the case of transliterating foreign names of inventions to Arabic, addressing the issue of phonemes when transliterating the words from English into Arabic. He emphasizes that transliteration is not reproducing pronunciation but reproducing letter by letter. Here arises the issue that many languages have letters that do not exist in others. To clarify Pinchuck's point of view, the Arabic sound of the letter *y* has three English equivalents, *e*, *y*, and *i* depending on the word in which they occur. At the same time, the Arabic sound of the letter *b* can have two equivalents: *p* and *b*.

Concerning these letters, consider the previous example of the word *Panadol* بنادول which is a loan word in Arabic, a name of a medical brand or a drug. The issue here appears in the pronunciation of /p/ in Arabic as /b/; if the word بنادول was back transliterated, it could easily be represented with /b/ rather than /p/. Another example can be represented by the pronunciation of vitamin فيتامين; the English equivalent for /ف/ is either /v/ or /f/; if the word فيتامين was back transliterated, it could mistakenly be pronounced by /f/ rather than /v/.

According to Argeg (2015), the method of transliteration is common in medical translation since most terms are adopted in Arabic, even though many of them do indeed own an Arabic equivalent that is rarely used. For instance, Gangrene: غانغرين and Cholera: كوليرا/ الهيبضاء. These terms are so rooted in Arabic to the limit that the Arabic equivalent is not even found when using the world's biggest search engine Google

translate, which is used by more than 500 million people around the globe, according to a statistic made in 2016 by K-international platform¹.

4.3 Arabization Method

The term *Arabization* التعريب first appeared in the 18th century during the Abbasid rule; it has several meanings and indications. However, only the ones related to translation will be considered for the purpose of this study. According to Al Isawi (1996), Arabization is the process that consists of including foreign concepts and words into the Arabic language after making simple structural and phonological changes based on the rules that govern the Arabic language. Badawi (cited in Al-Ma'ni, 2000, p. 20) assents to the statements of Al Isawi and mentions that Arabization attempts to render a term or a word from a foreign language into Arabic without any change being made except for any modification of pronunciation to match the Arabic sound system. Linguists have several concepts about Arabization, such as Hashim (1988), who defines this concept as the use of Arabic as the language of communication, education, and science.

The first effort in the Arab world on the Arabization of medical terms was in Damascus University in Syria in 1919 since it is the only university that studies medicine in the Arabic language. Later, many conferences were held to discuss the problem of utilizing Arabic in medical institutions in the Arab homeland. According to Al Minawi (2003), one of the biggest conferences held in Egypt in April 1932 was organized by the Arabic academies to discuss this issue.

Al Magrab (2011) suggests a different definition of Arabization, and he makes a comparison stating the differences between *Arabicization* and *Arabization*. He says that research is done to distinguish the two and show their significance. Through his analysis, he says that *Arabization* refers to local people. At the same time, *Arabicization* is connected directly to the language. By understanding the meaning of terminology in different languages, newer terms are produced. A new trend developed when new foreign terms are translated into Arabic using their Arabic forms. This process is called the *adoption method*, which gives a space for new words to enter a language. However, Matlūb (1983) gives a

¹ K-International is a platform for language and translation services, managed by global teams of highly skilled linguists and translators. The platform covers all articles and news about linguistics and translation.

simple definition by saying that “Arabization is the writing of foreign words in Arabic orthography” (p. 29), which leads us to a similar statement made by Ghazalla (1995) as he calls this method *naturalization*. He says “it is to take the English term and adapt it to Arabic alphabet and grammar, by changing one or two of its letters into Arabic ones, and having singular, plural, masculine, feminine or verb forms of it” (p. 13). The table below provides examples based on this statement.

Table 4

Examples of Arabized terms in different forms

Terms	Form	Arabization	Sentences
Chemical	(adj.)	كيميائي	It's a <i>chemical</i> reaction.
Chemist	(n.) singular	كيميائي	He's a <i>chemist</i> at the lab.
Chemists	(n.) plural	كيميائيون	The <i>chemists</i> are protesting.
Chemically	(adv.)	كيميائياً	The formula reacted <i>chemically</i> .

The previous examples conclude that Arabization is the adoption and formation of a foreign word to suit the Arabic pronunciation and grammar.

Arab scholars and linguists have different thoughts on using Arabization in the process of translating English terms into Arabic. Ghazalla (1995) argues that equivalence is the issue; for despite naturalization or Arabization being a move towards translation into Arabic, it is not satisfying since the terms remain as they are without Arabic equivalents. He further states that Arab people may not understand the words كيميائي or بايولوجي even though these words are written in Arabic letters. Only specialists can understand them. In contrast, Matlūb (1983) states that as long as these terms are written in Arabic grammar, phonology, and rhythm, they are now Arabic in structure and spirit. When it comes to Arabization, Al-Jalabi (1984) divides Arab lexicographers into the following two groups:

- The first group prefers to derive new equivalent words from classical Arabic linguistic patterns or by semantic extensions of former expressions.

- The second group is those who call for the translation of all foreign new words and the replacement of all borrowed words with equivalent ones.

The second group of Arab lexicographers must accept transliteration or borrowing foreign terms due to the growing number of new terms for inventions and discoveries every year. This can take lexicographers long periods till they coin equivalents in Arabic. With that being stated, Sieny (1987) believes that the reason for the delay in coining new words for foreign inventions is the lack of official terminological institutions and the slow progress in the production of official agencies.

Al-Magrab (2011) analyses the idea of Arabic language naturalization, which sums up this issue by adjusting foreign terms within the phonotactic barriers of the Arabic language and ending up by being considered a part of its grammatical systems.

4.4 Descriptive Translation Method

Scholars and linguists discuss descriptive translation (DT) and define it differently and from several aspects. For instance, Gutt (2000) criticizes descriptive translation and doubts its relevance to the TS in general. He argues that the word *interpretive* would be more suitable than *descriptive*. Bazzi (2009), on the other hand, defines DT from a sociological aspect as a *tool* that “is used to present faithfully the values, the hegemonic views or ideological positions of the target text participants” (p. 23). Darwish (2010) attempts to define DT from a linguistic aspect as “the use of a description to translate a term or a phrase in the source by characterizing it instead of translating it directly” (p. 40).

Yaseen (2015) mentions that when translating medical terms, doctors or specialists in the medical field tend to use transliteration over descriptive translation in case these two methods are compared due to the former's brief nature. Al-Quran (2011) emphasizes the term *brevity* and says that the descriptive method of transliteration is not correspondent to the linguistic criteria of brevity in use and ease in pronunciation. Haddad (1997) has a different opinion that supports this method; he says that it might actually be a great solution to many issues such as familiarity and clarity. He further describes the method of *Arabization* as simple and *transliteration* as unnatural. Given the medical term *Influenza*, it is transliterated into انفلونزا and descriptively translated into النزلة الوافدة; in

this case, it must be considered that the former is more commonly used in everyday communication than the latter. In contrast, the medical term *Anemia* is transliterated into أنيميا and descriptively translated into فقر الدم; the latter is more commonly used than the former since this term indicates a condition that is very common and occurs to people frequently.

Descriptive translation, like every method, has its cons; in some cases, it can be very lengthy. Consider the medical term *Neurofibromatosis*, which is rendered as الورم العصبي الليفي. If a translator attempts to use the descriptive translation method in translating an English source text that contains such repeated words, the result can be an oddly long Arabic target text. However, according to Yaseen (2015), this does not mean descriptive translation is useless; on some occasions, it serves best; descriptive translation is essential and necessary for doctor-patient interaction to make diagnosis clearer. Moreover, there are further cases where descriptive translation occurs among specialists, between doctor-doctor conversations, when a medical term does not ring a bell due to its clinical insignificance.

5. Methodology

The current research conducts an analysis on the adopted translation methods in translating 100 English medical terminologies into Arabic. The medical terminologies are extracted from the scripts of English medical series and their Arabic translations (200 medical terminologies altogether).

The criterion for choosing the English medical series depends on the highest ratings found in The Internet Movie Database (IMDb)² The online database includes statistics and information about TV shows, programs, and movies. It is considered the world's most authoritative source for AV materials (Borner, 2007). The terminologies are extracted from the scripts of the highest rating episode of five of the highest-rated medical series.

Table 5

Data Resources

Medical Series	Series' Rate	Season-Episode	Episode's Rate	Number of terminologies
The Good Doctor	8.1/10	S2-E10	9/10	51
The Resident	7.8/10	S2-E20	9.2/10	17
Grey's Anatomy	7.6/10	S2-E16	9.4/10	8

² Highest-rated medical shows according to IMDb: <https://imdb.to/3bqKjk>

New Amsterdam	8/10	S1-E16	8.3/10	10
Code Black	8/10	S2-E16	9.4/10	8
Total				100

In order to collect the data for analysis, the researcher adopted three stages process; carefully reading the scripts of the English medical shows, extracting the English medical terminologies and their Arabic translation of each episode, and finally, figuring the medical translations methods adopted in translating the terminologies based on the framework as mentioned earlier. As mentioned earlier, the unit of analysis is the English medical terminologies and their Arabic translation.

6. Analysis

This section introduces the analysis of the adopted methods in translating medical terminologies. A total of 100 terminologies were analyzed to investigate the adopted methods. However, due to the word limits only 4 examples will be drawn.

6.1 Insulin: انسولين

ST: I gave the proper dosage of *Insulin*, 10 units.

TT: أعطيتك جرعة الانسولين المناسبة. 10 وحدات.

Concerning the adopted medical translation methods, in this specific case, the translator dealt with a very specialized medical terminology and adopted *the transliteration method*. This terminology is considered to be familiar to a large number of the target readers. The terminology *Insulin* in its transliterated form is widely spread among ordinary people and have become an integrated part of their general knowledge; the transliterated term is used in regular everyday communication, which leads to the transliteration method being adopted in translating it into the target language.

6.2 Vesicular Rashes: طفح حويصلي

ST: They both have *vesicular rashes* on their necks.

TT: الاثنان مصابان بطفح حويصلي على رقبتيهما.

When it comes to investigating the adopted method in translating *vesicular rashes* into Arabic, it is found that the translator adopted *the literal translation method*. The translator replaced each English word with its equivalent in Arabic. He succeeded in conveying the same meaning indicated in both languages.

6.3 Leukemia: سرطان الدم

ST: What about my *leukemia*?

TT: ماذا عن سرطان الدم؟

In this case, the translator adopted *the descriptive translation method* to describe and explain the meaning of the disease's name in the Arabic language. This method is adopted to clarify foreign disease's name *leukemia*, it is commonly adopted when a medical term does not ring a bell to the target readers.

6.4 Chemotherapy: العلاج الكيميائي

ST: The *chemotherapy* has left you with frequent nausea.

TT: أصابك العلاج الكيميائي بغثيان متكرر.

It appears that the terminology *chemotherapy* is constructed of two parts, *chemo* for *chemical* and the word *therapy*. Therefore, the translator in this case adopted two translation methods for translating this medical term from English into Arabic. The first method is *Arabization* which is adopted in translating the word *Chemo* into كيميائي. The second method is the literal translation method to translate the word *therapy* into علاج.

7. Results and Discussion

After the data analysis, the results reveal that the translator has adopted several methods to render the English medical terminologies into Arabic. The methods are as the following.

Table 6

Results of the Data

Medical Translation Method	Frequency	Percentage
Literal Translation	69	69%
Descriptive Translation	25	25%
Transliteration	4	4%
Arabization	2	2%
Total	100	100%

From the results stated above, it can be noticed that the literal translation method achieved the highest frequencies of occurrence and the highest percentage of 69%. It appears that this method was the most adopted because it works best with achieving precise and complete translation of the medical terminologies since most of them have a certain meaning that must be conveyed in the most precise manner. This method seems suitable and adopted for most medical terminologies. On the other

hand, the descriptive translation method ranked second by forming 25%. This method is adopted to provide description and clarifications on the medical terminologies to make the meaning clear to the target readers. It seems that this method is comes in the second place because it is known to produce lengthy translations. The method that occupied the third stage by 4% is the transliteration method. This method is known to be adopted with the proper names by maintaining the same form as the original. However, in the context, not many proper names of drugs were used which explains the low percentage. The least adopted translation method that ranked the fourth stage by 2% and achieved the lowest occurrence frequency is the Arabization method. In this method equivalence is the issue; despite Arabization being a move towards translation into Arabic, it is not satisfying since the terms remain as they are without Arabic equivalents.

8. Conclusion

The data analysis of the adopted translation methods reveals that there were four translation methods adopted in the translation of 100 English medical terminologies. The results show that there were 69 cases that equal 69% adopt the literal translation method in translating English medical terminologies into Arabic, 25 medical terminologies were translated into Arabic by adopting the descriptive translation method by 25%, 4 English medical terminologies that forms 4% were translated into Arabic by adopting the Transliteration method, and only 2 cases that equal 2% adopted the Arabization method in the translation of English medical terminologies into Arabic. In conclusion, all the four methods proved their efficiency and were adopted by the translator in translating 100 English medical terminologies into Arabic extracted from the English medical series. Furthermore, it appears that literal translation method is the most adopted since medical terminologies have one meaning that requires only one translation, since medical terminologies hold only one specific meaning, it is best to translate it literally. In the second place, the descriptive translation method comes seconds in the number of frequencies after the literal translation method. This method is basically adopted to make describe the names of diseases, procedures, and conditions that require further clarification. The least adopted methods are transliteration and Arabization due to the shortage of terminologies that require these methods of translation. current study's results are

limited to the data of the current study. Different results might arise by utilizing other types of data and terminologies, which encourage the researchers to conduct other studies and make comparisons. The current study also helps the translators, translation teachers, and students to know which methods are adopted the most.

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