

## Contrastive Analysis Between English Medical Terms with Affixes and Their Indonesian Equivalent in Dorland's Illustrated Medical Dictionary

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### ABSTRACT

*Medical terms are language units used to describe medical conditions such as diseases, symptoms, anatomy, and procedures. Medical terms are composed of a combination of affixes and root words. This research focused on contrastive analysis, a study comparing two languages, the source language and their equivalent in the target language. This study aims (1) to find out similarities between English medical terms with affixes in English and their Indonesian equivalents in Dorland's Illustrated Medical Dictionary (2) to find out differences between English medical terms with affixes in English and their Indonesian equivalents in Dorland's Illustrated Medical Dictionary (3) to predict learning problems based on the differences between English medical terms with affixes in English and their Indonesian equivalents in Dorland's Illustrated Medical Dictionary. The data source of this research is "Dorland's Illustrated Medical Dictionary 31st edition" by W.A. Newman Dorland and translated into Indonesian under the title "Kamus Kedokteran Dorland Edisi 3" by Retna Neary Elseria et al. This research is qualitative, and the type of research is library research. The study's results revealed seven affix English medical terms that have similarities with Indonesian equivalents and 93 terms that differ from Indonesian equivalents. The similarities and*

*differences are divided into prefixes and suffixes. There are 8 types of prefixes and 4 types of suffixes. Predictions of problems that may occur in these conditions are in different forms, uses, and meanings. This research is expected to help better understand affixes in English medical terms and their Indonesian equivalents.*

**Keywords:** *affixes, contrastive analysis, English medical term, Indonesian equivalent, type of affixes*

## INTRODUCTION

The emergence of new terms is familiar and easy to find in everyday life. The opinion expressed by Sakri (1993: 230), retrieved from (Lauder, 2008), states that every natural language can develop in all directions and adapt to the demands of communication. The terms can be formed independently or due to absorption from foreign languages. One area that cannot escape the development of language is the field of medicine. Medical professionals need to know the entire lexicon of medical terms and phrases. These medical terms and phrases are commonly referred to as medical terms in the medical world.

Medical terminology is a term used in the medical world to communicate effectively between medical personnel. Medical terms describe parts and processes of the human body, medical procedures, diseases, disorders, and pharmacology. In short, medical terms use vocabulary to describe the body, its functions, and care for the human body. Some medical terms originate from ancient Greek and Latin. No doubt medical terms also have English in their use. As a result, students or people not from English-speaking countries will need help understanding medical terms. Thus, translating efforts are necessary to understand these medical terms so that communication runs well between medical experts, medical lecturers, medical students, doctors, and their patients.

Terms in the medical world have essential elements in the form of prefixes, root words, combined vowels, and suffixes. This element makes medical terms able to help describe various conditions in the human body. In this case, medical terms are a field of language in which the formation of terms has many meanings related to affixes. As Richards & Richard S. (2002) stated, language is a human communication system consisting of a structural

arrangement of sounds (written representations) into larger units consisting of morphemes, words, sentences, and utterances to textual discourse. In general, Affix consists of a prefix and a suffix. According to Brinton (2000), prefixes are affixes attached to the beginning of a basic word. It can be concluded that prefixes are morphemes that are added at the beginning of words that change terms; for example, the prefix "dis-" plus the word "agree" becomes "disagree."

The researcher focuses on the contrastive analysis theory for its use in this research. According to (Tarigan, 2009), contrastive analysis is an activity that tries to compare the structure of the first language with the structure of the second language to identify differences between the two languages. The purpose of the contrastive analysis is discover linguistic difficulties during the processing of the source language and target language to make it easier for students to understand the meaning of the two languages. It is because each region has a different language which requires humans to learn a second language besides their mother tongue. According to Charles Fries (1945) and Robert Lado (1957) in Royani (2013), mistakes made by students are caused by differences between their mother tongue and second language or foreign language. The ease of learning a second language is due to the similarities between the elements of the mother tongue and the elements of a foreign language.

It summarizes that differences in mother tongue and foreign language will cause difficulties, while similarities in language will make learning easier. This is similar to the statement conveyed by Novitasari and Jumanto (2018) which states that similarities occur, but the differences in translation cause understanding or translating problems. This theory also clarifies the statement of Klein (1986: 5), which states that second language acquisition is learned consciously and determined by previous language mastery. These similarities and differences can predict by contrastive analysis. as the present study focused on affixiation in English medical term and their equivalent in the "Dorland's Illustrated Medical Dictionary 31 Edition" by W.A. Newman Dorland that translated into "kamus Kedokteran Dorland, Edition 31," which Retna Neary Elseria et al.

## **RESEARCH METHOD**

The paradigm used to complete this research is a qualitative approach paradigm. The research paradigm is a pattern that shows the relationship between the variables studied and determines the number of problem formulations that need to be answered in research (Sugiyono, 2017). According to Moleong (2017), qualitative research examines the understanding of study subjects such as behavior, perceptions, motivations, actions, and others in a holistic manner arranged descriptively in the form of words and language.

The unit of analysis in this study is word class of English medical terms and their Indonesian equivalent. The case study refers to using affixes, especially prefixes and suffixes contained in these medical terms. Not only that, but the researcher also analyzed the similarities and differences in the use of affixes and found out the contributions and interrelationships of the translation.

The data sources used by the researcher were terms contained in the "Dorland's Illustrated Medical Dictionary." This dictionary was translated into "Kamus Kedokteran Dorland Edisi 31" by a translated physician, Retna Neary Elseria, along with other colleagues. This dictionary became bilingual from English to Indonesian, published in 2012. The dictionary is a revision of the 30th edition, which has been updated in the form of a color display and new illustrations. Dorland's Illustrated Medical Dictionary has around 124,000 entries, which is the dictionary with the most entries than any other single-volume medical dictionary.

Before analyzing the data, the researcher looked for sources to examine and was immediately interested in the bilingual medical dictionary. The researcher downloading the Dorland Medical Dictionary 31 edition and scanning it. the researcher then uses the translation to define which terms contain the affixes and which do not. Then the researcher providing a list of categories of English and Indonesian affixes. Then collect term data according to the list made before and place data from the source and target language data in a table. Last step is classifying the data to be analyzed as much as possible for research.

After the data have been collected, the researcher analyzed in five steps. First step is selection; In the selection step, the researcher determines the research subject, looks for data sources, and finds the right research title. The researcher has selected the affixes in English medical term and their Indonesian equivalent in Dorland's Illustrated Medical Dictionary". This dictionary was translated into "Kamus Kedokteran Dorland Edisi 31" by a translated physician, Retna Neary Elseria, along with other colleagues. The second step is description; the researcher describes a small corpus of data used and systematically describes the structure of the term. The third step is comparison; In this step, compare the differences and similarities of some data. The fourth step is prediction; There are similarities and differences based on the comparison results between the corpus data on English and Indonesian sentences, as there is a difference between English affixes and Indonesian affixes. The final step is verification. The researcher found a difference between English and Indonesian medical terms concerning the affixes. There is probably a learning or translating problem for Indonesian learners because of this difference.

## DISCUSSION

Based on the findings of previous research obtained from 100 data, 50 data are prefixes, and 50 data are suffixes in English and Indonesian. For further explanation, the analysis below explains the similarities and differences used between medical terms and affixes obtained from the findings:

### **1. The similarities of affixes in English medical term and Their Indonesian equivalent**

After going through five data analysis processes based on contrastive analysis, the data shows that there are medical term affixes that have similarities with their Indonesian equivalents. in this data there are 2 prefix data and 5 suffix data that are the same as their equivalent. Further discussion of each type of similarity is discussed in the following sections.

**a. Prefixes**

Based on the findings, 2 data have the same prefix between the English medical term and the Indonesian equivalent, which are as follows:

**Prefixes of time and order**

Excerpt 1

English term	Indonesian term	English term prefix	Indonesian equivalent Prefix
Premature	<b>Pradini</b>	Pre-	Pra-

In the contrastive analysis, the similarities between "pre-" and "pra-" are revealed in their similarity in function to indicate before a specific event. Besides that, the similarities can be seen in form and affix placement. In the form, pre- and pra are forms of affix words that the placement both are in front of the word.

**b. Suffixes**

In the data analysis, the researcher found five suffixes that are the same as the Indonesian equivalent, as follows:

**Noun suffixes**

Excerpt 2

English term	Indonesian term	English term prefix	Indonesian equivalent Prefix
Biopsy	<b>Biopsi</b>	-opsy	-opsi

In Indonesian, the word biopsy contains bio + -opsi found in biopsi, which is used to

explain similarity. -opsi is Indonesian suffix that meaning “Tindakan” or ‘pemeriksaan’. Linguistically, opsy and -opsi are direct equivalents with almost similar spelling and pronunciation. So, it can be said that these two suffixes have similarities between the English term and the Indonesian equivalent.

## 2. The differences of affixes in English medical term and Their Indonesian equivalent

Not only the similarities, but the data also found the differences between the English affixes of medical terms and their Indonesian equivalents. The difference can be seen from the form, affix placement, and type of affix words. To make the analysis clear, the researcher would like to give the table and the analysis:

### a. Prefixes

The following are several types of prefixes that have differences between the English medical terms and their Indonesian equivalents:

#### 1) Miscellaneous neo-classical prefixes

##### Excerpt 3

English term	Indonesian term	English term prefix	Indonesian equivalent Prefix
Menopause	Penghentian <b>haid</b>	meno-	Haid

In contrastive analysis, the prefixes Meno- and 'haid' have differences in form, function, and usage. The prefix Geront- does not have a direct equivalent in Indonesian. Geront- is a form of a prefix that comes before the root word, while 'haid' is an independent word denoting a condition in women.

## 2) Locative prefixes

Excerpt 4

English term	Indonesian term	English prefix	Indonesian equivalent Prefix
Circumventricular	<b>Mengelilingi</b> ventrikel otak	Circum-	Mengelilingi

The prefixes circum- and 'mengelilingi' differ in their form and usage. circum- is used for prefixes that are used to produce a new word. While 'mengelilingi' does not function as prefix in Indonesian equivalent. Mengelilingi is an independent word that forms a verb.

## 3) Prefixes of degree and size

Excerpt 5

English term	Indonesian term	English prefix	Indonesian equivalent Prefix
Macrocephalus	Kelainan kepala <b>membesar</b>	Macro-	Membesar

The prefixes macro- and 'membesar' differ in their form and usage. macro- is used for prefixes that are used to produce a new word. While 'membesar' does not function as prefix in Indonesian equivalent. 'Membesar' is an independent word that forms a verb. The conclusion from the two data above is that prefix macro- from English medical term in entrance is equivalent to 'membesar' in Indonesian.

## 4) Negative prefixes

Excerpt 6



English term	Indonesian term	English prefix	Indonesian equivalent Word
Anesthesia	<b>Pembiusan</b>	An-	Pembiusan

The prefixes an- and 'pembiusan' differ in their form and usage. An- is used for affixes but does not carry specific meaning. While 'pencegahan' does not function as prefix in Indonesian equivalent. Pembiusan is an independent word that forms a noun. Another difference is English form by word, Indonesian is descriptive phrases.

### 5) Number prefixes

Excerpt 7

English term	Indonesian term	English prefix	Indonesian equivalent Prefix
Polyadenitis	Peradangan <b>banyak</b> kelenjar	poly-	Banyak

The difference between the prefix's poly- and 'banyak' is their form and usage. Poly- is used for prefixes that are used to produce a new word. While 'banyak' does not function as prefix in the Indonesian equivalent. banyak is an independent word that denotes the quantity of something. Hence, in short prefix poly- from the data above was equivalent a word "banyak" in Indonesian equivalent.

### 6) Prefixes of time and order

From all of the data of prefixes, the researcher does not find the words that categorizing in the prefix of time and order in the Dorland's illustrated medical dictionary.

### 7) Prefixes of orientation and attitude

Excerpt 8

English term	Indonesian term	English prefix	Indonesian equivalent Prefix
Antisepsis	<b>Pencegahan</b> sepsis	Anti-	Pencegahan

The prefixes anti- and 'pencegahan' differ in their form and usage. Anti- is used for prefixes that are used to produce a new word. While 'pencegahan' does not function as prefix in Indonesian equivalent. 'Pencegahan' is an independent word that forms a noun indicating an action's result.

## 8) Reversative or privative prefixes

Excerpt 9

English term	Indonesian term	English prefix	Indonesian equivalent Prefix
Deodorant	<b>Membuang</b> bau tidak enak	De-	Membuang

The prefix de- and 'membuang' differ in their form and usage. de- is used for prefixes that are used to produce a new word. While 'membuang' does not function as prefix in Indonesian equivalent. membuang is an independent word that can stand alone. Thus, the word with the prefix de- from English medical term is equivalent into 'membuang' in the Indonesian term.

### b. Suffixes

Following are some types of suffixes that have differences between English medical terms and their Indonesian equivalents.

#### 1) Noun suffixes

Excerpt 10

English term	Indonesian term	English term prefix	Indonesian equivalent Prefix
Glioma	<b>Tumor</b> otak	-oma	Tumor

The difference between the suffixes -oma and 'tumor' is their form and usage. -oma is used for suffix that are added to the end of root words to produce a new word. Whereas 'tumor' does not function as suffix in the Indonesian equivalent. 'Tumor' is an independent word without any remuneration.

## 2) Adjective Suffixes

Excerpt 11

English term	Indonesian term	English term prefix	Indonesian equivalent Prefix
Feelingful	Emosi <b>penuh</b>	-ful	Penuh

The suffixes -ful and 'penuh' differ in their form and usage. -ful is used for suffix that are used to add in the end of root words to produce a new word. Whereas 'penuh' does not function as suffix in Indonesian equivalent. Rather it functions as a word that denotes an adjective.

## 3) Adverb Suffixes

Excerpt 12

English term	Indonesian term	English term prefix	Indonesian equivalent Prefix
Adenomegaly	<b>Pembesaran</b> suatu kalenjer	-megaly	Pembesaran

The difference between the megaly and 'pembesaran' suffixes is their form and usage. -ful is used for suffix that are used to add in the end of root words to produce a new word and show adverb. Whereas 'pembesaran' does not function as suffix in Indonesian equivalent.

### **3. The predicted of learning or translating problems based on differences between English medical term with affixes and their Indonesian equivalent**

After going through the process of comparing and describing the similarities and differences between English medical terms and their equivalents in Indonesian. In this section, the researcher present learning or translating those learners may experience. If the elements compared between the source language and the target language have the same characteristics, it can make it easier for learners to learn the target language. But on the contrary, if what is obtained after a comparison has different features, it makes it difficult for learners to understand the target language.

Moreover, when focusing on medical terms, the researcher used to understand and learn medical terms and their forming elements. In addition, interpreting medical terms cannot be done carelessly because it can affect many people's lives. Therefore, the researcher predicts the mistakes that learners may encounter as described below:

- a. The differences in the types of English affix words and their Indonesian equivalents
- b. English medical term affixes do not have a direct equivalent in Indonesian.
- c. English medical term affixes can be different formations in Indonesian equivalent.
- d. The differences in the pattern or placement of English medical term affixes and their Indonesian equivalents

## **CONCLUSION**

Based on the results of data analysis and the previous explanation, the affixes in medical terms have similarities and differences that can affect learners in learning the language. This conclusion can be explained as follows. From the research, the results of the data were found the prefixes of English medical terms have two similarities with the prefixes in their Indonesian equivalents. As for the suffix itself have four similarities with the Indonesian equivalent. According to the differences, English prefixes and Indonesian prefixes equivalents have 48 different data.

Meanwhile, In English suffixes found there are 46 data different from the equivalent Indonesian suffixes. So, the total data obtained is 100 data. In conclusion, most of the equivalents between English medical term affixes to Indonesian are in the form of words or words, and there are even phrases.

The several data have similarities between English medical term and their Indonesian equivalents. from seven data of the same medical terms, it was found that the similarities can be seen from the placement of the suffix, spelling, and pronunciation, and the meaning of the suffix; some of the same suffixes are borrowed terms from the English medical term (SL) to the Indonesian equivalent (TL) which are commonly used words in Indonesian. The differences in the affixes of English medical terms and the Indonesian equivalent are very likely to occur. It is because each language has its own rules and systematics in applying affixes. English only contains prefixes and suffixes. Meanwhile, Indonesian is divided into prefixes, suffixes, infixes, and confixes. Of course, this be a problem for learners because not all English prefixes and suffixes can be matched into Indonesian affixes. In short, English medical terms and their Indonesian equivalents are based on the structure and context of the word in question. English affixes are not only translated into their Indonesian counterparts but can also be words or phrases. Errors made by learners are due to the interference of affix word patterns in their home language that are different from the target language. The learners should be aware of the differences of the affixes in medical terms and

their Indonesia, so that they will not make learning mistakes, or in this context, translating errors due to the differences.

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