

# Analysis of Synonymous Word Collocations for Treatment and Therapy in the Covid-19 Corpus

<sup>1</sup> Moh Kavın Lidinillah, <sup>2</sup> Fiqih Aisyatul Farokhah, Putra Irvin Ikmiliansyah

Institut Agama Islam Tarbiyatut Tholabah

[kavin@iai-tabah.ac.id](mailto:kavin@iai-tabah.ac.id), [fiqih.aisyah12@gmail.com](mailto:fiqih.aisyah12@gmail.com), [putrairvani458@gmail.com](mailto:putrairvani458@gmail.com)

## Abstract

The world is currently infected with the covid-19 virus pandemic. The whole world is trying to find a way out, but in this case there is something positive about the covid-19 virus pandemic. One of them is learning words related to this co-19 pandemic. The purpose of this study was to identify words that were politicized with synonym words, namely treatment and therapy. The method in this study uses the corpus method with data extracted from the sketching machine application. Mother's research results are that word care is more politically related to nouns than adjectives, while therapeutic words are politicized with various words, such as nouns, adjectives, and verbs.

**Keyword:** Covid-19, Sketch Engine, Treatment, Therapy

## Introduction

Corona Virus Disease (Covid-19) is a virus that is currently ravaging the world. Millions of people have been infected with this virus which has caused this virus to quickly spread in various parts of the world. According to WHO health experts, the method of spreading this virus is through droplets of saliva (droplets) or vomit (fomites), in close contact without protection. It can also be spread through toilet seat, bathroom door handles and sinks.

This virus was first discovered in Wuhan, a region in China in December 2019 and spread in various countries so that WHO declared it a global pandemic. The initial signs of people exposed to this virus are fever, cough and shortness of breath which lasts for 2 to 14 days. These symptoms can be severe if exposed to people who have heart or lung disease, people with weak immune systems, and people who are elderly, they will be susceptible to this virus.

The outbreak of the corona virus pandemic has caused the government to move quickly to make decisions so that the spread of this virus can be minimized. The public is urged to maintain cleanliness and health, and to keep a distance from others in order to reduce the spread of this virus. One of them is by prohibiting large-scale gatherings, not leaving the house for any reason except it is urgent and if you leave the house you have to use health procedures, one of which is by wearing a mask, carrying hand sanitizer and other health equipment, working from home. Patients affected by this virus must undergo a series of treatments at the hospital, namely by isolation, medication, regular therapy, and must comply with the rules of the hospital to prevent many patients from contracting this disease. The government also urges people who come from outside the city not to return to their home areas, so as to reduce the spread of this virus.

Treatment and therapy are words in English that are commonly associated with the world of health. These two words have similar meanings. According to the English dictionary, the words treatment and therapy have the following meanings;

Treatment: to treat, to care for, to treat, to process, to handle

Therapy: therapy, treatment of disease, efforts to restore health

Based on the definitions of the words above, the two words have almost the same meaning, which is to restore health. However, there must be a difference in the meaning of each word that is synonymous considering that there are very few absolute synonyms<sup>1</sup>. This study aims to determine the difference in meaning of the words treatment and therapy based on the resulting corpus data

Corpus-based studies for synonymous words in English have been carried out a lot, they can even be made into final assignments for students. The results obtained from corpus-based studies indicate that the linguistic corpus approach can effectively show patterns of similarities or differences in the words presented in the research object. In this study, the words treatment and therapy are used in the covid-19 corpus in the sketch engine application. The Sketch engine is the ultimate tool for exploring how language works. Its algorithm analyzes authentic texts of billions of words (corporate text) to identify words that are distinctive in the language, those that are rarely used, and words

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<sup>1</sup> Cruse, D. *Meaning in Language: An Introduction to Semantics and Pragmatics*. (New York: Oxford University Press. 2004)

that occur frequently<sup>2</sup>. (sketchengine.eu). Sketch engines are widely used by linguists, translation experts, students, and teaching staff as a tool for researching languages.

## Method

There are many corpus methods as a study for language at this time. The method of analyzing linguistic phenomena using a corpus is known as corpus linguistics. According to Tognili-Boneli considers corpus linguistics as a theoretical approach to studying language<sup>3</sup>. As a methodology, the main characteristics of the corpus linguistics corpus are in its empirical approach, focusing on authentic approaches, approaches to meaning, and using digital devices to process language data in order to obtain objective results, but the results given by the corpus still need to be interpreted, when the data is interpreted in that's when theory and linguistic hypothesis guidance is needed<sup>4</sup>.

So far, the method used by linguists to find out the different meanings of synonymous words and to find out the differences in the semantic characteristics of one word from another is the component analysis method.<sup>5</sup>. Taking into account the advantages of the corpus and corpus linguistics, the method used in this study is the corpus method, because the corpus has a large number of authentic data sets and can provide clearer information about the similarity in meaning of words that are similar

In this study, we use the Covid-19 corpus data from the sketch engine which can be accessed via <https://www.sketchengine.eu/> with the words treatment and the word therapy. The two words will then be analyzed based on their collocations, this is because collocations can provide semantic analysis of a word and also collocations can convey messages implicitly<sup>6</sup>.

## Finding and Discussion

The keywords in this study are the words treatment and therapy using the -5 and +5 collocations. The following word results are contained in the table below;

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<sup>2</sup> <https://app.sketchengine.eu/#dashboard?corpname=preloaded%2F covid19> diakses pada tanggal 30 juni 2020

<sup>3</sup> Tognili\_Boneli. *Corpus Linguistic at Work*. (Amsterdam: John Benjamin. 2001)

<sup>4</sup> Hunston. *Corpora in Applied Linguistic*. (Cambridge: Cambridge University Press. 2002)

<sup>5</sup> Subroto, E. *Pengantar Studi Semantik dan Pragmatik*. (Surakarta: Cakrawala Media. 2011)

<sup>6</sup> Sinclair. *Corpus, Concordance, Collocation*. (Oxford: Oxford University Press. 1991)

Tabel 1. Colocation of Treatment

Treatment	Collocate	Coocurances	T-score	MI
217.106	Supportive	1.314	36.13	8.30
	Sufficient	167	11.49	3.17
	Able	250	13.32	2.66

Tabel 2. Colocation of Therapy

Therapy	Collocate	Coocurances	T-score	MI
80.148	Desirable	38	5.99	5.18
	Practical	44	6.27	4.19
	Recommended	24	4.88	8.19

As shown in the table above the word treatment has an occurrence frequency of 217,106 and the word therapy has an occurrence frequency of 80,148. The frequency of the word treatment appears more than the word therapy. The word treatment is collocated with the word supportive, which has coocurances of 1.314, has a T-score of 36.13 and MI of 8.30. Compared to the two words in the table, the word supportive has more large values. Besides being collocated with verbs and adjectives, the word treatment is also collocated with nouns, as shown in the example below:

1	  doi.org they contain (Wu, et al., 2011; Schloissnig, et al., 2013) . In contrast, the clinical <b>treatment</b> of a patient may depend on whether or not a particular virus, or a consortium of
2	  doi.org stitutions are a well documented response of influenza viruses and HIV to drug <b>treatment</b> (Gubareva et al., 2001; Tisdale et al., 1993; Boucher et al., 1993) . <b>&lt;/s&gt;&lt;s&gt;</b> We
3	  doi.org : or medicine for Zika. <b>&lt;/s&gt;&lt;s&gt;</b> In particular, the special concern on the vaccine <b>treatment</b> to Zika and Dengue arising from antibody-dependent enhancement strongly em
4	  doi.org 2) (13) (14) (15) (16) (17) (18) . In particular, the unique concern on the vaccine <b>treatment</b> to Zika and Dengue strongly emphasizes the irreplaceable role of the Zika prote
5	  doi.org or medicine available. <b>&lt;/s&gt;&lt;s&gt;</b> In particular, the special concern on the vaccine <b>treatment</b> to Zika and Dengue arising from antibody-dependent enhancement strongly em
6	  doi.org 2) (13) (14) (15) (16) (17) (18) . In particular, the unique concern on the vaccine <b>treatment</b> to Zika and Dengue strongly authorifunder. <b>&lt;/s&gt;&lt;s&gt;</b> All rights reserved. <b>&lt;/s&gt;&lt;s&gt;</b>
7	  doi.org ll types. <b>&lt;/s&gt;&lt;s&gt;</b> Practically, these genes can be regarded as targets for cancer <b>treatment</b> (Fraser 2015) . The data from these three groups provided a rare opportunity to
8	  doi.org onse mounted by infected lung epithelial cells. <b>&lt;/s&gt;&lt;s&gt;</b> Disease prevention and <b>treatment</b> is dependent on our 10 understanding of the shared and unique responses elici
9	  doi.org im-free medium. <b>&lt;/s&gt;&lt;s&gt;</b> Statistical tests for differences in expression between <b>treatments</b> were conducted on the normalized 103 expression data using a linear mixed-eff
10	  doi.org mparisons. <b>&lt;/s&gt;&lt;s&gt;</b> More specifically, expression was modeled as a function of <b>treatment</b> while probes for a particular 105 gene were treated as a random effects using ti

Picture 1

The word treatment has many collocations with nouns such as the words clinical, drug, vaccine. As shown in Figure 1. Although there are several treatment words that are collocations with adjectives, such as the words able, sufficient and verbs such as supportive, the level of appearance is slightly different from those that are collocations with nouns.

From the results of the collocation of these nouns, most of the nouns that collocate with the word treatment are positive nouns, such as the words vaccine, clinical which are nouns that have a positive meaning, and there are also negative nouns such as drugs, but the level appears less than words that have a positive meaning.

The word therapy, like the example in table 1, which collocates with the word practical, has the highest level of co-currencies of the other two words, and a high T-score when it is collocated with the same word. MI has more collocations with the word recommend than the other two words. The word therapy has collocations with more types of words than the word treatment, such as nouns and adjectives like picture 2

-  doi.org an important viral reservoir and may inform research and development of antiviral **therapies** . </s><s> . CC-BY-NC-ND 4.0 International license is made available under a Th 
-  doi.org ics, the cough typically taking 10 -14 51 days to resolve [4] . Although the aim of **therapy** is to provide a definitive cure, reoccurrences 52 are frequent and if not treated si 
-  doi.org some patients have been successfully treated with chemotherapy and molecular **therapies** , there is no standard treatment regimen for FLC patients (Torbenson, 2012) . Fu 
-  doi.org itial treatment (Maniaci et al., 2009) , underscoring the need to develop effective **therapies** for this cancer. </s><s> FLC is genetically characterized by a ~400 kb heterozyg 
-  doi.org in effective CA12 inhibitor, SLC-0111, is currently in clinical trials as combination **therapy** for metastatic pancreatic cancer. </s><s> We found that pharmacological suppre 
-  doi.org duce fibrosis in organs and transduce angiogenesis makes it a target for cancer **therapy** . </s><s> RNAi-based therapy has proven to be very efficient and specific in turn 
-  doi.org nsduce angiogenesis makes it a target for cancer therapy. </s><s> RNAi-based **therapy** has proven to be very efficient and specific in tumor growth inhibition. </s><s> TI 
-  doi.org r gremlin-1 silencing. </s><s> These siRNAs can be considered for RNAi-based **therapy** because off-target effects are predicted to be minimal. </s><s> GREM1, located 
-  doi.org the expression of target genes in many remediation processes including cancer **therapy** . </s><s> When the target gene is a matured mRNA, the interference mechanisr 
-  doi.org :xogenous siRNA to silence target genes. </s><s> Major issues in siRNA-based **therapy** have to do with delivery, efficacy, off-target effects, toxicity and immunostimulato 
-  doi.org n of immune responses and off-target effects limit efficiency of siRNA-mediated **therapy** . </s><s> The occurrence of off-target effect is due to cross matching of siRNA tr 

## Picture 2

The word therapy has more collocations with wider types of words, for example nouns, adjectives, and verbs, as shown in the example in Figure 2, namely the words effective, combination, desirable, recommended which fall into the types of adjectives, nouns, and words. Work. Words that collocate with the word therapy are also dominant with words that have a positive meaning, even though the collocation consists of several types of words.

Based on the results above, it can be seen that the word treatment and the word therapy both have collocations with various types of words, such as adjectives, nouns, and verbs. The word treatment is more colloquialized with nouns than adjectives and the word therapy is collocated with various types of words, such as adjectives, nouns and verbs. The collocation range of the word therapy is wider than that of the word treatment.

## Conclusion

Based on the results of the analysis above, it can be concluded that the words treatment and therapy have the same collocation with various types of words, such as adjectives, nouns, and verbs. The word treatment is more dominant in collocation with nouns and the word therapy is more in collocation with various types of words. This shows that in the covid-19 corpus in the sketch engine application the use of the word treatment is more dominantly used with nouns in one sentence in the corpus, while the

word therapy is used more evenly because it collocates with various types of words if the two words are seen with collocations -5 and +5 and comes up with collocations with different kinds of words.

Even though these two words have almost the same meaning, namely to be able to maintain health, but in a language that has almost the same meaning as the two words there must be a slight difference in their usage. Just like the two words taken from the Covid-19 corpus data in the sketch engine application with collocations of -5 and +5.

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