

## Conference Paper

# Semantic Emotion in COVID-19 Online News

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**ORCID:***Devi Lusiana: <https://orcid.org/0000-0002-7773-3064>***Abstract**

This research aimed to determine the dominant semantic emotion in the online news about COVID-19. The study's data included 28 sentences from five news sources by two publishers – CNN News and Jakarta Post. This study used qualitative research method and Shaver's theory in the analysis of the data. It was found that the news sentences were rich in semantic emotions. 12 sentences (43%) contained fear, five sentences (18%) contained sadness, and four sentences (14%) contained joy. Seven sentences did not contain basic emotions because they only provided information. So, it can be concluded that the dominant emotions used in COVID-19 online news are fear emotions. By knowing the semantics emotions in the news, people can fully understand the purpose of the news.

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## 1. Introduction

Semantic emotions can be interpreted as how we interpret emotions in accordance with sentences, thoughts, situations, conditions, or circumstances. Emotions intertwine with the nervous system and affect the thoughts, language, circumstances, feelings, responses, and a degree of pleasure or displeasure. Emotion commonly cannot be separated from situation, personality, disposition, mood, creativity, motivation, and temperament. Emotion also has a strong relation with words or language. Personal emotions can be seen from the word or expression they told. The unknown language will raise problems for everyone who communicates translating or interpreting it.

Myers (2010) states that human emotions are complex psychological states that consist of mental arousal, expressive behaviors, conscious thoughts, and feelings. There are many theories of basic emotion, such as Smith (2015), which represents 154 human emotions or other lists of basic emotion; Shaver et al. (2001), who represent 135 distinct emotions. Emotion would be easier to learn by relating it or creating a model that can encompass the larger emotions field, but it needs to understand what sentence or

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language contains before making it clear, whether the dominant emotion expressed is love, anger, sadness, joy, hate or frustration. Word emotion may cause problems to a person who cannot translate or interpret the language. The lexicon of emotion can be seen from various cultures, languages, or social groups. The problem of emotions arises from understanding language function or emotions in the process of communication. Language in one way is to expand the social experience, and absolutely helps people to express or perceive emotions in conveying the meaning.

Online News is an electronic newspaper, which aims to convey the news to the public. It can be reused by obtaining electronic information. Online News aims to expand knowledge and understanding of news disseminated through electronic media platforms. Electronic News provides a platform for people to be able to publish and read applied research and includes research articles, essays, or book reviews relevant to electronic news that is constantly evolving and dynamic. As we know in the mid-1990s, the internet has been firmly incorporated into the daily habits of an increasingly large population. Therefore, it is not surprising that online news sites are increasingly developing in the media system in almost all countries in the world. As Cassidy (2007) states, online news receives a higher credibility rating from online journalists than from its print counterparts. However, online news producers “only regard online news information as a fairly credible whole.” then it can be interpreted that online news gets good response for the community as a trusted media.

News about COVID - 19 is a world phenomenon that makes the world stop all activities temporarily. It was discovered in 2019 and caused respiratory disease. There are many casualties caused across the globe. Mortality rates are increasing every day. This virus also shows symptoms such as fever, cough, sore throat, and shortness of breath. This coronavirus can spread from person to person quickly. This coronavirus, or popularly known as COVID-19, was first detected in Wuhan, China, and has now become a major public health challenge for countries around the world. The coronavirus was originally named 2019-nCoV and was officially referred to as a coronavirus with acute respiratory syndrome (SARS-CoV-2).

There are many studies conducted on semantic emotions in song lyrics. Preliminary data from this study are whether there are semantic emotions in online News about COVID-19 and what is the dominant semantic emotion used in COVID-19 online news.

## 2. Literature Review

## 2.1. Description of Emotion

The term 'emotion' is still debated about what constitutes a definition of 'emotion.' Despite the variety in descriptions, all theoretical approaches are that emotions are expressed in a variety of ways. The emotion of words such as anger, joy, love, sadness, and fear plays a central role in human life. Based on emotion words, humans recognize and communicate emotions by representing many varieties of basic emotion.

James (1890) states that emotions are nothing but the proprioception of our bodily symptoms, a claim that is currently being revived in the form of various constructionist accounts of emotion.

Emotions are psychological conditions, but not all psych conditions such as exhaustion nor confusion. Emotions sometimes expressed facially, but they need to know that not all facial expressions indicate emotions. Emotions can be interpreted as how we interpret emotions in accordance with sentences, thoughts, situations, conditions, or circumstances. Myers (2010) states that Human emotions are complex psychological states that consist of psychological arousal, expressive behaviors, conscious thoughts, and feelings.

Some researchers have displayed concern about interest, such as Ortony & Turner (1990), in the basic emotions list. As both have been listed by other theorists, they are included in the table below.

This research is conducted to analyze the semantic emotion proposed by Shaver et al. (2001) from CNN and Jakarta Post.

Shaver et al. (2001) state that the idea of categorizing human emotions and trying to find relationships between emotions is not new. Shaver et al. (2001) have done tremendous work, and they group 135 human emotions under the six categories of love, joy, anger, sadness, fear, and surprise, although they are skeptical about surprise being a separate emotional category.

In addition, Shaver et al. (2001) claim that basic emotions are a subset of the human emotions that most theorists believe basic in all human beings. 135 human emotions under the six categories of love, joy, anger, sadness, fear, and surprise can be seen in the table below:

## 2.2. The Description of Online News

Online News is an online version of a newspaper that aims to publish information electronically. Online News can broadcast the update news fastly. Good online media

TABLE 1: Basic Emotions List by Ortony & Turner (1990)

Theorist	Basic emotions
<b>Arnold</b>	Anger, aversion, courage, dejection, desire, despair, fear, hate, hope, love, sadness (11)
<b>Ekman, Friesen &amp; Ellsworth</b>	Anger, disgust, fear, joy, sadness, surprise (6)
<b>Frijda</b>	Anger, disgust, fear, joy, sadness, surprise (6)
<b>Gray</b>	Anger and terror, anxiety, joy (3)
<b>Izard</b>	Anger, contempt, disgust, anxiety, fear, guilt, interest, joy, shame, surprise (10)
<b>Jack, Garrod &amp; Schyns</b>	joy, sadness, fear, surprise, disgust, anger (6)
<b>James</b>	Fear, sadness, love, anger (4)
<b>McDougall</b>	Anger, disgust, joy, fear, acceptance, tender-emotion, wonder (7)
<b>Mowrer</b>	Pain, joy (2)
<b>Oatley &amp; Johnson-Laird</b>	Anger, disgust, anxiety, joy, sadness (5)
<b>Panksepp</b>	Anticipation, fear, anger, panic (4)
<b>Plutchik</b>	Acceptance, anger, anticipation, disgust, joy, fear, sadness, surprise (8)
<b>Shaver et al.</b>	love, joy, anger, sadness, fear, surprise (6)
<b>Tomkins</b>	Anger, interest, contempt, disgust, anxiety, fear, joy, shame, surprise (9)
<b>Watson</b>	Fear, love, anger (3)
<b>Weiner &amp; Graham</b>	joy, sadness (2)

credibility and recognition also increase public confidence in the accuracy of the news. Online health news is news that sees news that informs health electronically by exploring articles about fitness, diet, nutrition, and disease.

So in the other hand, it can be interpreted that online news gets the good response for the community as a trusted media Online news articles also have legal force regarding defamation, privacy, and copyright and that applies to all online media throughout the world. It is regulated in the Data Protection Act for online newspapers and news pages. News reporters are tasked with finding the latest news by recording videos and writing briefly what is needed for a news page. Nowadays, much online news is trying to integrate the internet into their operations. This is due to human needs for the internet and intertwines each other’s technology. In this study, the researchers concern about finding the data from online health news related to the COVID-19.

### 2.3. Online News Used in This Study

TABLE 2: Human Emotions by Shaver et al. (2001)

Primary emotion	Secondary emotion	Tertiary emotions
Love	Affection	Adoration, affection, love, fondness, liking, attraction, caring, tenderness, compassion, sentimentality
	Lust	Arousal, desire, lust, passion, infatuation
	Longing	Longing
Joy	Cheerfulness	Amusement, bliss, cheerfulness, gaiety, glee, jolliness, joviality, joy, delight, enjoyment, gladness, happiness, jubilation, elation, satisfaction, ecstasy, euphoria
	Zest	Enthusiasm, zeal, zest, excitement, thrill, exhilaration
	Contentment	Contentment, pleasure
	Pride	Pride, triumph
	Optimism	Eagerness, hope, optimism
	Enthrallment	Enthrallment, rapture
	Relief	Relief
	Surprise	Surprise
Anger	Irritation	Aggravation, irritation, agitation, annoyance, grouchiness, grumpiness
	Exasperation	Exasperation, frustration
	Rage	Anger, rage, outrage, fury, wrath, hostility, ferocity, bitterness, hate, loathing, scorn, spite, vengefulness, dislike, resentment
	Disgust	Disgust, revulsion, contempt
	Envy	Envy, jealousy
	Torment	Torment
Sadness	Suffering	Agony, suffering, hurt, anguish
	Sadness	Depression, despair, hopelessness, gloom, glumness, sadness, unhappiness, grief, sorrow, woe, misery, melancholy
	Disappointment	Dismay, disappointment, displeasure
	Shame	Guilt, shame, regret, remorse
	Negligence	Alienation, isolation, neglect, loneliness, rejection, homesickness, defeat, dejection, insecurity, embarrassment, humiliation, insult
	Sympathy	Pity, sympathy
Fear	Horror	Alarm, shock, fear, fright, horror, terror, panic, hysteria, mortification
	Nervousness	Anxiety, nervousness, tenseness, uneasiness, apprehension, worry, distress, dread

### 2.3.1. CNN News

CNN News is one of the online news that presents the updated news directly through your mobile or laptop. There are several headlines in CNN Online News such as health, food, fitness, wellness, parenting, vital signs. The researchers take three update news from CNN News as the data in this study they are: Italy records the lowest increase in coronavirus infections since the end of February, Brazil reports more than 12,000 new coronavirus cases and Coronavirus cases in DC Spike.

### 2.3.2. Jakarta Post

Same with CNN News, the Jakarta Post is also a media that informs news electronically. This online news has several headlines such as news, business, seAsia, lifestyle, Travel, Multimedia, Deep lock, etc. For the data in this study, the researchers take two titles from this online news they are: Family-friendly policies crucial to help parents bear the brunt of COVID-19, experts say, and Indonesia's record of unprecedented daily spike in COVID-19 cases as 'new normal' commences.

## 2.4. The Description of COVID-19

COVID-19 is an infectious disease caused by the coronavirus and results in acute respiratory syndrome. Wuhan, the capital of China's Hubei province, is the place where the disease was first identified in December 2019 and then spread globally. COVID-19 also caused a viral pandemic and continues to this day. Common symptoms in COVID-19 patients such as fever, coughing, and shortness of breath. But this disease also shows other symptoms such as fatigue, muscle aches, diarrhea, sore throat, loss of odor, and abdominal pain. The time from infection with a virus is usually around five days but can range from two to fourteen days. While most cases of COVID-19 show mild symptoms, and a few others develop very acute symptoms such as pneumonia and multi-organ failure. This virus spreads quickly among people without physical distancing and is transmitted through small droplets produced by coughing, sneezing, or talking. People can also be infected by being close to or touching something that has been contaminated and then touching their eyes, nose, or mouth. This virus can survive on the surface of objects for up to 72 hours and can be contagious for three days.

According to Mahase (2020), On 30 January 2020, the World Health Organization (WHO) announced that this outbreak was a public health emergency of international concern.

Until today, there is no specific vaccine or antiviral treatment that has been found for COVID-19. COVID-19 prevention is done by physical distancing, maintaining health, and self-quarantine. Several countries in the world do a lockdown system to inhibit the spread of this virus. The World Health Organization (WHO) declared the 2019 COVID outbreak as International Public Health Concern Emergency (PHEIC) on 30 January 2020 and a pandemic on 11 March 2020.

### 3. Research Method

This study was conducted by using a descriptive qualitative method in which the purpose is to find out the dominant semantic emotion in online news articles related to covid-19. Qualitative research was related to describing the common elements of the various forms of qualitative methods. Nazir (2014) says that descriptive qualitative is one that is used to make descriptive of situation, event, or accumulate the basic data. It means that this research is not intended to find a new theory but to find new evidence through the truth of a particular theory. The researchers investigated the semantic emotion types in online health news of covid-19. In this study, the data were the texts in health online news articles about covid-19. This method was carried out by selecting the theories, sources from relevant books, and journals that supported the analysis.

#### 3.1. Data and Data Source

The data of this research were the texts from online health news about covid-19. The data source was online news from the internet about covid-19. The observation was conducted by the researchers to analyze the semantic emotion in health online news article of covid-19

#### 3.2. Variable and Indicator

The researchers only used one variable that was Semantic emotion in the online news of covid-19; while the indicators of this research were the semantic emotion types in the texts.

### 3.3. Technique of Analyzing Data

The data were analyzed by using descriptive qualitative method. The steps of the analysis included:

1. Downloading some articles in online news about covid-19
2. Deciding which texts to be analyzed randomly
3. Searching the newest articles and journals to support the study
4. Identifying the texts based on the semantic emotion
5. Classifying the words and the sentences showing the semantic emotion
6. Describing the dominant types of semantic emotion
7. Analyzing the semantic emotion in online news about covid-19
8. Counting the percentages of each type of semantic emotion

## 4. Result and Discussion

In this part, the results of data analysis are presented. The fundamental goal of this study is to analyze the semantic emotion of the online News of Covid-19.

### 4.1. Data Analysis

There was five online news analyzed in this study. The two online news contains five news reports on the issue of COVID-19. They were, Italy records the lowest increase in coronavirus infections since the end of February, Brazil reports more than 12,000 new coronavirus cases and Coronavirus cases in DC Spike” from CNN News and “Family-friendly policies crucial to help parents bear the brunt of COVID-19, expert say and Indonesia’s record of unprecedented daily spike in COVID-19 cases as ‘new normal’ commences published by Jakarta Post.

There are five sentences in the online news entitled Italy records the lowest increase in coronavirus infections since the end of February, there are seven sentences in the article by title Brazil reports more than 12,000 new coronavirus cases, and there are five sentences from online news entitle Coronavirus cases in DC Spike, there are five sentences from online news entitle “Family-friendly policies crucial to help parents bear the brunt of COVID-19, expert say and there are six sentences from online news entitled



Indonesia’s record of unprecedented daily spike in COVID-19 cases as ‘new normal’ commences published by Jakarta Post. It means there were 28 sentences analyzed in relation to the word emotions from Shaver’s theory. The findings of the types of emotion will then be discussed in the findings section. In this data analysis, the first problem posed was answered.

**1. What is the dominant semantic emotion used in Online News of COVID-19**

TABLE 3: Analysis of Basic Emotion from Online News

No	Title	Online News	Shaver's Basic Emotion					
			Love	Joy	Anger	Sadness	Fear	Surprise
1.	Italy records the lowest increase in coronavirus infections since the end of February	CNN News	0	4	0	1	0	0
2.	Brazil reports more than 12,000 new coronavirus cases.	CNN News	0	0	0	0	3	0
3.	Coronavirus cases in DC Spike	CNN News	0	0	0	0	4	0
4.	Family-friendly policies crucial to help parents bear the brunt of COVID-19, expert say	Jakarta Post	0	0	0	3	2	0
5.	Indonesia’s record of unprecedented daily spike in COVID-19 cases as ‘new normal’ commences published by Jakarta Post.	Jakarta Post				1	3	
<b>Total</b>			<b>0</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>12</b>	<b>0</b>

From the 28 sentences written in the five news from two sources online news, it was found that no sentence is in the type of love, anger, and surprise, four sentences are in the type of joy, five sentences are in the type of sadness, and twelve sentences are found in the type of fear.

**4.2. Results**

The emotions of fear are mostly found in two online stories that contain five stories compared to other emotions (12 sentences out of 28 sentences). That is because of the reported news topic. The articles talk about Covid-19, which is a frightening phenomenon of science, raising fear, anxiety, and worry with the increasing of new cases of the spike in death that can attack anyone anytime.

The first news entitled, "Italy records the lowest increase in coronavirus infections since the end of February," published by CNN News. There are four sentences containing Joy emotions, which are classified into tertiary emotion; they are optimism, hope, and zest. That is because the news informs the data from the Italian Civil Protection Service that there was a decrease in cases of coronavirus infection after more than a month gradually reducing lockdown system; infection in Italy, there was also a decrease in mortality, and the number of those treated intensively was 424, a decrease in 11 cases. The sentence contains hope for Italy to be better than before, and also gives emotion optimism that the lockdown system shows good results for the people of Italy.

The second News entitled, "Brazil reports more than 12,000 new coronavirus cases" published by CNN News, there are four sentences containing fear emotions. Emotional fear can be analyzed from sentences containing fear due to death during the past 24 hours, which increases the total number of deaths to 29,937, and the existence of that label, Brazil is second only to the United States in the number of coronavirus cases.

The third news entitled "Coronavirus cases in DC Spike" published by CNN News; there are three sentences containing fear emotions. Emotional fear can be analyzed from sentences that inform that Washington, DC, on Monday reported a surge in coronavirus cases. In a statement, the DC Department of Health confirmed a new peak in the case of the recorded positive coronavirus; DC Health confirms the surge in the case of restarting the first phase, The DC Department of Health reported 56 new positive coronavirus cases and two coronavirus deaths confirmed on Sunday, increasing the total number of cases to 8,857, and the total number of coronavirus deaths to 468. The entire news contains fear, uneasiness, apprehension, worry, distress, dread.

The fourth news entitled "Family-friendly policies crucial to help parents bear brunt of COVID-19, expert say" published by Jakarta Post; there are two sentences that contain fear emotions, and three sentences contain sadness emotions. The sentence can be analyzed from the sentence that informs a Midwife named Yati Maryati, 37, who was worried about interacting with her children every time she returned from the Puskesmas. During the COVID-19 pandemic, she wore a mask wherever she went, even at home. But Yati and her husband must continue to work to pay off loans and living expenses for their families while keeping their three children entertained at home when school closes. The fast-developing situation of COVID-19 has forced many parents like Yati to do anything to meet the needs of their families during the pandemic. This news sentence contains sadness and fear. Yati must keep working to meet her needs in difficult conditions.

And from the last news entitled Indonesia’s record of unprecedented daily spike in COVID-19 cases as ‘new normal’ commences published by Jakarta Post. There are three sentences containing fear emotions, and a sentence sadness emotions. The sentence can be analyzed from the sentence that informs about the news delivered by The Indonesian Ministry of Health confirming 993 new COVID-19 cases on Saturday, the highest increase of one day in official counts to date. COVID-19 national task force spokesman Achmad Yuriyanto said 286 new cases had been recorded in East Java; the epicenter of the new COVID-19 earthquake in the country. Earlier, authorities declared the provincial capital of Surabaya as a “black zone” because more than 3,000 cases had been confirmed in the city. This sentence contains emotions of fear, worry, and sadness due to the increasing COVID-19 case and the determination of the black zone for Surabaya with a high number of cases.

The percentages of the dominant emotion in each article can be seen in the table below.

TABLE 4: The Percentages of the Dominant Emotion

No	Online News Title	Number of sentences	Emotion					
			Love	Joy	Anger	Sadness	Fear	Surprise
1	Italy records the lowest increase in coronavirus infections since the end of 5 February.		0	4 (80%)	0	1 (20%)	0	0
2	Brazil reports more than 12,000 new coronavirus cases	7	0	0	0	0	3 (43%)	0
3	Coronavirus cases in DC Spike	5	0	0	0	0	4 (80%)	0
4	Family-friendly policies crucial to help parents bear the brunt of COVID-19, expert say	5	0	0	0	3 (60%)	2(40%)	0
5	Indonesia’s record of unprecedented daily spike in COVID-19 cases as ‘new normal’ commences	6	0	0	0	1(7%)	3 (50%)	0
Total		<b>28</b>	<b>0</b>	<b>4(14%)</b>	<b>0</b>	<b>5 (18%)</b>	<b>12 (43%)</b>	<b>0</b>

Based on the table above, it can be concluded that the five online news from two publishers is rich in semantic emotions. From the 28 sentences analyzed, it was found that 12 sentences (43%) contained emotion fear, five sentences (18%) were in sadness emotions and four sentences (14%) were in joy emotion while seven sentences were

not found containing basic emotion because they only provide information without containing basic emotions of Shaver's (2001) theory list.

This percentage is not stable. It was found that more percentages of sentences were in emotional fear. It was also found so because the News of COVID-19 gave a frightening, anxious, and all the people around the world wanted COVID-19 to finish immediately and cause no more casualties.

### 4.3. Discussion

Based on the data analysis conducted, it is found that the texts mostly contain a fear of emotion. In other words, the texts are rich in semantic emotion.

The results of this study are to show that the five online news from two publishers is rich in semantic emotions. From the 28 sentences analyzed, it was found that 12 sentences (43%) contained fear emotion, five sentences (18%) were in sadness emotions and four sentences (14%) were in joy emotion while seven sentences were not found containing basic emotion because they only provide information without containing basic emotions. So, this study supports the respective theory.

## 5. Conclusion

Based on the findings above, it can be concluded that from the five news from two publishers. From the 28 sentences written in the five news from two publishers, it was found that out of the 28 sentences written in the five news, there is no sentence in the types of love emotion, anger emotion, and surprise emotion, while four sentences are in joy emotion; five sentences are in sadness emotion, and twelve sentences are found in fear emotion.

So, it can be concluded that the dominant emotions used in COVID-19 online news is fear emotion. By knowing the semantics emotions of the news, people understand more that communication could go through semantic emotions and at the present time, most of the communications are done via electronic devices and this is also caused by the pandemic.

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