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What Indonesian Netizen Says about Covid-19 Vaccination? A Corpus Assisted Discourse Studies of YouTube's Comment

Abstract

This research analyzes the views of the Indonesian people regarding Covid-19 vaccination through comments on the YouTube social media platform. This study aimed to analyze arguments, discussion patterns, attitudes, and views of the Indonesian people in the YouTube video comments at the start of the Covid-19 vaccination in Indonesia. Academically, this research provides in-depth information about the views of the Indonesian people on Covid-19 vaccination, which comes from online comments. This research is helpful for information providers and governments to make evidence-based policies and campaigns for effective communication strategies for vaccination programs. This study uses mixed methods by combining corpus linguistic methods with critical discourse analysis. Using the help of Antcont software, we analyzed 22,529 comments on the five videos about Covid-19 vaccination. The results showed various public views about vaccines; we found fifteen categories of comments: actors, health, media, rejection, acceptance, state, religious, mass, Islam, other countries, law, economy, region, knowledge, and politics. The contribution of this research is to fill in the gaps in the literature about people's reactions to vaccination in the context of social media. The implication of this research is to contribute to decision makers to take evidence-based policies to communicate Covid-19 vaccination.

Keywords:

CADS; Indonesian netizen; social media; vaccination Covid-19; youtube

Introduction

The Covid-19 pandemic has spread worldwide, with millions of people being infected (E. Dong et al., 2020). Various infodemics also accompanied the spread of this virus, including misinformation and even conspiracy theories (Agley & Xiao, 2021). The existence of an

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information infodemic can impact people's mental health by influencing public fear and emotional feelings and not believing in the virus itself (Su et al., 2021). Seeing the rapid spread of Covid-19 and the dangers that will arise if it is not immediately addressed, one of the most likely ways to prevent the spread of this virus is to develop a vaccine (Liu et al., 2020).

Vaccines protect those vaccinated and the broader community by reducing the spread of disease in the population (Sari & Sriwidodo, 2020). Vaccines are proven to reduce disease transmission significantly because they are one of the health interventions that effectively reduce mortality, disability, and poverty. After all, vaccines are considered the most cost-effective investment to avoid disease (Andre et al., 2008; Ratzan et al., 2019). Vaccines have been repeatedly proven to reduce the incidence of diseases such as polio, measles, diphtheria, and jaundice. This is because of the massive vaccination campaign that seeks to reach everyone globally (Lazarus et al., 2020).

However, along the way, the value of vaccination is undermined by the low public confidence in the vaccine itself. In 2019, the WHO named vaccine doubt defined as "delayed acceptance or refusal of vaccination despite vaccination services being available", as one of the top ten global health threats (Puri et al., 2020). This doubt about vaccines is not a new phenomenon. In the United Kingdom, anti-vaccines have been around since the late 18th century. This phenomenon proves that vaccine doubt is a series that continues until today (Wolfe & Sharp, 2002).

In Indonesia, anti-vaccines has existed for several reasons, one of which is using theological arguments to reject vaccination (Muallifah, 2018). There are doubts about the authenticity of vaccine products, ranging from the source of vaccine ingredients to manufacturing procedures. This phenomenon has continued until now after the spread of the Covid-19 pandemic in Indonesia and the government-issued vaccination-related policies. This policy began in October 2020, when the President of the Republic of Indonesia promulgated Indonesian Presidential Regulation No. 99 of 2020 regarding the procurement of vaccines and the implementation of vaccinations to fight the Covid-19 pandemic. This regulation regulates the government's authority, ministries/agencies and their officials in planning vaccination activities. However, the emergence of this policy has led to various debates and sentiments regarding the Covid-19 vaccine, including misinformation that influences people's doubts about vaccination. This hesitancy can lead to delays in developing herd immunity, persistent infections, susceptibility to outbreaks, mortality in high-risk groups, increased risks for migrating workforces, and the imminent threat of economic paralysis (Rahi & Sharma, 2020).

The same negativity may overshadow the rollout of the Covid-19 vaccination. In addition, the already known public suspicion due to the speed of development of a Covid-19 vaccine may raise vaccination doubts. This suspicion can lead to delays in the development of herd immunity, persistent infections, susceptibility to outbreaks, deaths in high-risk groups, increased risks for the migrating workforce and the imminent threat of economic paralysis, as witnessed during the lockdown (Rahi & Sharma, 2020).

The Covid-19 vaccination issue has also spread to various online news channels, mass media, and social media. Anti-vaccine messages are more common on the internet compared to other media (Davies et al., 2002). Social media is also characterized by its potential to reach broad audiences and disseminate information quickly (Betsch et al., 2012; Lua, 2019; Ospina, 2019; K. Wilson & Keelan, 2013). Social media is also characterized by its potential to reach a wide audience and disseminate information quickly (Betsch et al., 2012; Blankenship et al., 2018). One of the Indonesian people's most widely used social media is YouTube (Hootsuite & Social, 2021).

Several studies on anti-vaccine on YouTube have also been carried out, including when the human papillomavirus vaccine went viral on YouTube; this research examined the video source, tone and public response (Briones et al., 2012). Other vaccine research on YouTube is related to professional concerns in the health sector about the quality and truth of information received by the public sourced from social media, namely YouTube (Keelan et al., 2007). YouTube is a website that allows its users to share and watch videos. News about the COVID-19 vaccine can be accessed and watched again via the social media platform YouTube, and users can also comment on videos uploaded on the platform (Burgess & Green, 2009). Recently, YouTube has shown that its content contains more anti-vaccine messages than other online media. On the one hand, this platform fulfils society's need for alternative perspectives, but on the other hand, it can give rise to misinformation to the public (Venkatraman et al., 2015). We will analyze various comments from the public on the COVID-19 vaccine video uploaded on YouTube using corpus linguistics methods with critical discourse analysis to monitor public trust in vaccination and understand the social media construction of the COVID-19 vaccination event.

This research raises a relevant and urgent topic regarding the views of Indonesian netizens regarding COVID-19 vaccination, which has become the global spotlight. Several studies on debate, efficiency, safety, religious views and the impact of vaccination have appeared in various levels of society, and these views are often reflected in comments on social media such as YouTube (Briones et al., 2012; Lander, 2020; Puri et al., 2020; Song & Gruzd, 2017). This research will answer research questions: How do Indonesian netizens view the Covid-19 vaccination through comments on social media Youtube? This study aims to see the community's response to sensitive health issues that are becoming increasingly important, focusing on videos about the Covid-19 vaccination broadcast on YouTube social media after the government issued a policy on vaccine procurement and implementation of Covid-19 vaccinations.

This article has significant relevance because it summarizes and analyzes the views of Indonesian netizens on Covid-19 vaccination, focusing on netizen comments on YouTube, one of the largest social media platforms, and has a significant influence on public opinion and views. Through in-depth analysis, this research will fill in the gaps in the literature by providing more accurate insights into the various views among Indonesian netizens regarding the Covid-19 vaccine. Previous studies have identified many general patterns in public views on vaccination, but the influence of social media platforms such as YouTube has yet to be fully explored.

This study offers a significant academic and practical contribution. From an academic perspective, this research provides a deeper understanding of the views of Indonesian netizens on the Covid-19 vaccination as reflected in online comments. It will provide in-depth insight into the main arguments that emerge, and the validity of views and attitudes in social media. This research also adds to the literature on community interaction with health issues in the context of social media. From a practical perspective, this research can provide health policymakers and information providers with knowledge to adopt evidence-based policies and campaign for more effective communication strategies for Covid-19 vaccination. Accurate information and proper understanding can help reduce doubts about vaccination. Next, we will look at people's concerns and doubts about vaccines in Indonesia and see how netizens in Indonesia discuss vaccine doubts on social media, YouTube by analyzing 22,529 comments on five videos about Covid-19 vaccination with the highest number of views, using corpus linguistics methods with critical discourse analysis.

Literature Review
Public Concerns and Doubts About Vaccines in Indonesia

Although recognized as one of the most successful public health measures, vaccination is considered unsafe and unnecessary. Lack of confidence in vaccines is now seen as a threat to the success of vaccination programs. This doubt about vaccines is believed to be responsible for decreasing vaccine coverage and increasing the risk of outbreaks and epidemics of vaccine-preventable diseases (Dubé et al., 2013). Vaccine doubt refers to delays in receiving or refusing a vaccination even though vaccination services are available. Vaccine hesitancy is complex and context-specific, varying by time, place, and vaccine. This is influenced by factors such as self-satisfaction, comfort, and self-confidence (MacDonald et al., 2015).

Concern about vaccination is common and has probably increased since the 2009 influenza pandemic. This scepticism is reflected in expressions of concern about the value or safety of vaccination. This means that hesitation is not limited to those who refuse vaccination or those who encourage others to refuse vaccination. For many people, vaccination attitudes are shaped not only by healthcare professionals but also by various other sources of information, including online sources and social media (Yaqub et al., 2014). Recent public health research shows that people who refuse vaccination have not been constrained by pro-vaccination campaigns (Wellcome, 2018).

Contemporary anti-vaccination sentiment appears to be most concentrated in wealthy and highly educated democracies (S. L. Wilson & Wiysonge, 2020). In some well-resourced, high-income countries, inadequate and poor communication of immunization programs can increase vaccine doubt and resistance (Offit et al., 2002). Meanwhile, in low and middle-income countries, scarce communication resources limit people's capacity to resist negative information about vaccines and achieve community support for vaccine programs (MacDonald et al., 2015).

Social Media and Vaccine Doubt

Many people are not wholehearted and feel hesitant to implement vaccines because they doubt the benefits of vaccines, worry about safety and question the need for vaccines. This hesitation is certainly different from the act of rejecting the vaccine. Although still implementing the vaccine, doubts still occur about certain aspects (Yaqub et al., 2014). Based on theory and experience in general, these doubts immediately become denial (Salathé & Bonhoeffer, 2008) and impact the spread of disease outbreaks from groups that do not vaccinate (Gangarosa et al., 1998; Jansen et al.,

2003). The level of rejection of vaccines raises an assumption that the lack of information received, lack of access to facts or incorrect information, and incomplete understanding of the benefits of vaccines (Hobson-West, 2003).

Vaccine hesitancy can be triggered by health information obtained from various sources, including new media such as the Internet and social media platforms (Puri et al., 2020). More and more patients are consulting the internet, such as social media, to obtain health information, resulting in an increase in the role of interactive social media in public health promotion (Coomes et al., 2019; Daley et al., 2018; Puri et al., 2020; Warren & Wen, 2017). Social media has achieved global penetration along with increasing access to technology (Puri et al., 2020). Social media platforms are internet-based applications that enable a community of users to create, interact, and share with others, with multiple platforms for different types of content (Betsch et al., 2012; Lua, 2019; Ospina, 2019; K. Wilson & Keelan, 2013). In contrast to traditional media, social media allows individuals to create and share content globally without editorial oversight quickly. Users can choose their content stream, contributing to ideological isolation (Puri et al., 2020). Social media is also characterized by its potential to reach large audiences and disseminate information very quickly (Betsch et al., 2012; Blankenship et al., 2018).

Vaccine content is widely present across social media platforms with some characteristics of research looking at how vaccine content is portrayed on a wider platform via the internet (Arif et al., 2018; Basch & MacLean, 2019; Davies et al., 2002; Ekram et al., 2019; Gunaratne et al., 2019; Odone et al., 2015). Anti-vaccine content is widely shared on social media (Meleo-Erwin et al., 2017; Oehler, 2019; Ospina, 2019). Vaccine hesitancy is not a new phenomenon, but rampant anti-vaccination misinformation through social media has given it new urgency, especially in light of the Covid-19 virus pandemic and hopes for rapid vaccine development and spread (Dubé et al., 2018; Lane et al., 2018; Marti et al., 2017).

One of the social media used by Indonesians to find information is YouTube (Hootsuite & Social, 2021). YouTube is a social media platform site that provides a space for the public to share videos, watch videos and share comments (Burgess & Green, 2009). YouTube is a very important platform in today's internet participation. YouTube reports more than one billion users and billions of hours of video viewed every day. Some of the content contains entertainment, education, and most of the content is intended to influence public opinion on various matters, including health, one of which is vaccines (Yiannakoulias et al., 2019).

Public Opinion in Social Media

As a basic concept of democracy, public opinion is a public representation that is socially constructed and shaped by the methods and data that are its sources (McGregor, 2019). Social media enables a more public, relational, and time-sensitive representation of public opinion. Opinions on social media are public and relational because these opinions are expressed publicly to or for an audience (McGregor, 2019). The nature of conversations on social media represents a public and collective arena in which public opinion is manifested, similar to public meetings or community groups (Anstead & O'Loughlin, 2015).

Social media provides an overview of attitudes at a particular moment and offers more temporal sensitivity in measuring public sentiment because it captures public expressions and reactions to political events that occur minute by minute (McGregor, 2019). Compared to opinion polls, social media can produce a better and more comprehensive understanding of public perceptions of specific topics in a more scientific manner (X. Dong & Lian, 2021). Several studies, such as the use of social media, Twitter, can provide an imperfect but reliable picture of

public opinion. Twitter shows an accurate and distorted reflection of public opinion. One viral tweet can distort the picture, even if the sub-issues are similar. In addition, discussions on Twitter are more focused and may need more nuance, which is essential for understanding what the public considers necessary (Klingeren et al., 2021). Other research shows that political journalists now equate social media with public opinion (Anstead & O'Loughlin, 2015).

On the other hand, social media can also be a means of spreading fake news or hoaxes. This can influence public opinion with incorrect or unverified information. In addition to providing the public with an unprecedented capacity to communicate, social media is also a significant factor in the emergence of marginalized opinions that damage public health. The principle of reconciling free speech with social media policies to expose lies remains an enigma for democracy (Larson et al., 2016; Mesch & Schwirian, 2015).

Research Methodology

This research uses a mixed-method by combining the corpus linguistics method with critical discourse analysis. The corpus linguistics method represents a quantitative approach to finding the frequency, keywords, collocations, and concordance of what words occur most frequently in a big data set (Baker et al., 2008). After that, critical discourse analysis will be carried out to represent the qualitative methods used to express the ideologies and what discourses are contesting through lexical pattern analysis. The Corpus-Assisted Discourse Study (CADS) was chosen because of its advantages in combining various tools of corpus linguistics and critical discourse analysis to reveal language patterns in large collections of words (called corpora) to guide data interpretation in order to reduce the subjectivity of critical color analysis (Calzada Pérez, 2018; Jaworska, 2016; Taylor, 2013).

This research begins with the corpus linguistic method related to language studies based on a collection of words from electronic collections, one of which is through comments on YouTube videos on the COVID-19 anti-vaccine phenomenon in Indonesia, which is known as corpora. In this study, we were assisted by the Antcont application in analyzing patterns and grammar (Anthony, 2019). There are five videos from YouTube related to the COVID-19 Vaccine

Table 1.
Profile of Videos

No	Video Title	Upload Date	YouTube Channel	Viewers (As of April 7, 2021)	Comments
1.	*Tidak dengan Obat, Dokter Bocorkan Hanya ini yang Bisa membunuh Virus Covid-19 Didalam Tubuh* (Not with Drugs, Doctors Leak that Only this can Kill the Covid-19 Virus in the Human Body)	September 29, 2020	Cumicumi	2.130.590	1.741
2.	*Ini Orang Pertama yang Jadi Relawan Uji Coba Vaksin Corona* (This is the First Person to Volunteer for Corona Vaccine Trial)	March 17, 2020	KOMPASTV	1.911.453	3.086
3.	*Siapa Bisa Dihukum Kalau Tolak Vaksin? - ROSI (Bag 2)* (Who Can Be Penalized For Rejecting Vaccines? - ROSI (Chapter 2))	January 15, 2021	KOMPASTV	896.751	4.294
4.	*DEBAT PANAS! Staf Ahli Kemenkominfo VS Fadli Zon Soal Hoaks Vaksin Corona	ILC tvOne* (HOT DEBATE! Expert Staff of the Ministry of Communication and Informatics VS Fadli Zon Regarding the Corona Vaccine Hoax | ILC tvOne)	October 28, 2020	Indonesia Lawyers Club	859.667	12.577
5.	*LIVE: Vaksinasi Covid-19 Perdana di Indonesia, 13 Januari 2021, Pukul 09:00 WIB* (LIVE: First Covid-19 Vaccination in Indonesia, January 13, 2021, 09:00 WIB)	January 13, 2021	Sekretariat Presiden	855.583	831

Source: Processed by Authors, 2021

whose comments are collected. The five videos were selected based on the ranking of the highest number of viewers. We only chose the five videos with the most views due to research limitations; the number of comments on the five videos alone was 22,529 comments. Table 1 describes the video title, video upload date, YouTube channel name, number of views, and number of comments.

This research utilizes search engine features based on the highest number of viewers, and comments from each video are collected. The collection of comments on each video was carried out using the help of tools from the digitalmethods.net web page, which produced five datasets containing a collection of comments from the five YouTube videos. Automatically, the system will collect comments from each YouTube video and store the collected comments in the database. Next, the dataset is exported in .txt format to be processed using the Antconc application. This app is meant to look up frequencies, keywords, collocations, and concordances.

We group YouTube comments into fifteen categories: actor, health, media, rejection, acceptance, state, religious, mass, Islam, other countries, law, economy, area, knowledge, and politics. This category is grouped according to the contents of the comments on YouTube videos. Next, we look at the word frequency distribution more precisely, along with the keywords. Frequency refers to the number of words that appear in the corpus and is also the most basic data in CL (O'Keeffe & McCarthy, 2010). The data that has been processed using the AntConc software produces a word list as well as a frequency list. The existence of this frequency can help researchers to focus on a text that has been categorized. Furthermore, we found a concordance, which is an analysis capable of uncovering associations that would be difficult to detect, and providing for certain discourses and biases. Concordance analysis begins by carefully examining lexical and grammatical patterns that offer clues about the use and meaning of search terms in context (Baker et al., 2008).

Result

This section will outline the main findings of the research and analyze and discuss the implications of these findings in the context of Indonesian netizens' views on the Covid-19 vaccination.

Category and Frequency

The analysis of the research findings begins by categorizing words/word patterns that describe the pros and cons of the community towards Covid-19 vaccination in Indonesia. The purpose of categorizing words/word patterns that emerge from data processing through the AntConc software is to find out the distribution of word categories from comments on the five YouTube accounts analyzed.

There are 15 categories obtained from all the comments of the five selected YouTube videos. The first and most common category is actors, which contains characters or parties who are often mentioned in YouTube video comments. Second, health, contains terms in the realm of health. Furthermore, the third category is media, which contains terms that are closely related to media, such as web pages, online media, television, print media, and social media. The fourth category is refusal, which contains a collection of words that indicate a rejection of the Covid-19 vaccination. In contrast, the fifth category contains words that indicate acceptance of the Covid-19 vaccination. The results of the data analysis also show that words such as government, state, ministry, and parliament are often mentioned in public comments on YouTube videos about vaccination. This brings us to the sixth category, namely state. The seventh category is religious, containing phrases related to religious terms in general. Then, the eighth category is mass, which contains

Table 2.
Word Categorization in Comments on Youtube Videos about vaccinations

No.	Category	Frequency	Keywords
1	Actor	19.969 words	Fadli Zon, Joko Widodo/ President, Minister, Placeman, Professor, Rocky Gerung, dr Tirta, WHO, Health Minister, Ustadz, Somad, Karni Ilyas, Rossi, Influencer, Najwa
2	Health	13.501 words	Vaccine, Covid, Doctor, Virus, Healthy, Dead, Disease, Brain, Ill, Health, Life, Mask, Medicine, Body, Immune, Inject, Delta, Strong, Healed, Safe, Volunteer
3	Media	5.734 words	Https, ILC, YouTube, www, com, Data, Information, Comment, News, Communication, Facts, Television
4	Refusal (Cons)	5.610 words	No, Hoax, Fear, Refuse, Reject, Pity, Stupid, Opponent, Coercion, Noisy, Dislike, Inconsequential, Criticism, Breaking, Danger, Slaughtered, Panic, Angry, Roasting, Threatening, Attacking, Lies, Conspiracy, Provocative, Rejection, Failure, Inconsistent, Skeptic, Cons, Camouflage, Theatrical
5	Acceptance (Pros)	5.544 words	Yes, Want, May, Agree, Spirit, Mandatory, Good, Thank you, Helpful, Receiving, Support, Rescue, Belief, Pros, Trusted, Recipient, Able, Perfect, Hope, Have, Open, Appreciate, Help, Love, Use, Invite, Accept, Honesty, Aim, Confess, Willing, Get, Show, Obey, Protection, Accepted
6	State	5.515 words	Government, Indonesia, *Kominfo* (Ministry of Communication and Informatics), State, Law, Regime, Act, BKN (National Civil Service Agency), School, Politics, Nation, Position, Democracy, Policy, Corruption, Party, Social Assistance, National, BUMN (State-owned enterprise), Pancasila, Election, Cabinet, Ministry of Health, Authoritarian, Republic, Oligarchy, Commander, Parliament, United, President, APBN (State budget), Military, Legislature
7	Religious	3.924 words	Allah, Believe, Atheist, Religion, God, Granted, Divinity, Hindus, God, Wisdom, Heart, Obedient, Blessings, ISIS, Protect, Agnostic, Zionist Jews, Zionist, Christian, Worldly, Religious, Prayer, Jews, Worship, Gods, Doomsday, Lust, Surrender
8	Mass	2.336 words	People, Society, Mass, Residents, Public, Student, *Cebong* (nicknames for Joko Widodo supporters), Family, Netizens, Demonstrators, Population, Consumers, Audience
9	Islam	1.931 words	Amin, Kafir, Alhamdulillah, SWT, Muslims, Muhammad, Halal, Bismillah, Insya Allah, Islam, Hereafter, *Ikhtiar* (Effort), *MUI* (Indonesian Council of Religious Scholars), Ustad, Prayer, Doom, Tafsir, Pahala (Reward), Fasting, Fatih, Alaikumsalam, Iqro, Jihad, Al-Qur'an, Dlail, Hamzah, Masya Allah, Ridho, Robbal, Santri, Rizky, Hajj, Hidayah, Kardun, Khilafah, Mosque, Ramadan, Astagfirullah, Rasulullah, Sholawat, Gratitude, Takbir, Ummah, Assalamualaikum, Barokah, Istiqomah, SAW, Sunnah, Suudzon, Takabur, Adab, Adam, Congregation, Fitrah
10	Other Countries	621 words	China, America, England, Europe, Wuhan, Malaysia, Arabic, Australia, South Korea, Israel, Germany, Sweden, Japan, Poland, Africa, Hong Kong, Brazil, India, Cambodia, Russia, Taiwan, Singapore, Zimbabwe, Netherlands, Afghanistan, Iran, Uighur, Brunei, Ethiopia, Italy, Norway, France
11	Legal	352 words	Law, Criminal, Article, Sanctions, Regulation, Violation, Free, Honorable, Defense, Prove, Justice, Custom, Omnibuslaw, Set, Corrupted, Stoned, Court
12	Economics	304 words	Business, Economics, Capital, Tax, Sell, Assets, Industry, Money, Shoppee, Corporation
13	Regional	200 words	City, Region, Surabaya, Kalimantan, Jakarta, Java, Papua, Aceh, Village, District, Lombok, Padang, Central Java, East Java, Maluku, Palembang, Sukabumi, South Sumatra
14	Knowledge	187 words	Insights, Title, Taught, Understanding, Material, Research, Reference, Smart, Studies, English, Lessons, Educate, Biology, Psychology
15	Political	44 words	Politics, Presidential Election, Campaign, Political Parties

Source: Processed by Authors, 2021

the words community, public, to the term netizen. The ninth category is Islam, which contains phrases related to Islam. The Islamic category is distinguished from the religious category, where religious contains general religious phrases. Meanwhile, the Islamic category is more specific in classifying phrases that are limited to Islam only.

Next, the tenth category is other countries, which indicates the involvement of other countries that are also mentioned in YouTube video comments. Eleventh is a legal category that contains terms in the realm of law, such as criminal, article, sanction, and regulation. Phrases such as business, economics, capital, taxes, industry, and corporations are grouped into the twelfth category, namely economics. Thirteen is the regional category, containing names for regions in the territory of Indonesia

which are also mentioned in the YouTube video comments. The fourteenth category is knowledge, with the keyword's insight, title, understanding, and educating. The last category is about politics, which contains keywords such as politics, presidential election, and campaign.

Of the 15 categories, it was found that actors, health, and media were the three categories with the highest number of words. In the fourth and fifth places, there are categories of rejection and acceptance that can indicate the pros and cons of the community towards Covid-19 vaccination in Indonesia. After describing the categories and frequencies of the comment data, the next step is the concordance to find out the meaning of the main key words from public comments on YouTube videos about Covid-19 vaccination in Indonesia.

Concordance
Vaccine's Concordance

Talking about the meaning of vaccination, it was found that concordance is an analysis that is able to reveal associations that would be difficult to detect and provide the existence of certain discourses and biases. Concordance analysis begins with a careful examination of lexical grammatical patterns that offer clues about the use and meaning of search terms in context (Baker et al., 2008). There are comments that are pros and cons about the Covid-19 vaccination in Indonesia. From the comments of people who are pro-vaccine in the table, it means that people want vaccines to get group immunity against viruses. People believe that the vaccine given has undergone a long trial before being injected into humans, and the community is even willing to pay if the vaccine given is paid for.

Table 3.
Vaccine's Concordance

Word Type	Concordance	Pros/Cons
Vaccine	Being offered a vaccine, he refused, but when he is given an option regarding the type of vaccine a, b, c, etc., he became picky.	Pros
	Vaccine manufacturing companies definitely can't make fake vaccines, they must have tested it.	Pros
	This is difficult and we don't trust the government even more, vaccines are not clear. This is a mess... What a stupid compressor.	Cons
	Vaccine / not yet vaccinated. It will be recorded first before the vaccine. There is an administration. Not just injecting people.	Pros
	Why do you need a vaccine? No need for vaccines.	Cons
	Using Sinovac's vaccine. What if after being vaccinated there will be an effect that causes death?	Cons
	Is there a guarantee after being vaccinated that I will not be infected with the Covid virus?	Cons
	If something happens to those who get vaccinated, is the government responsible or not?	Cons
	These vaccines existed before the virus spread, which means vaccines are a business. Only Allah knows all.	Cons
	The development of the virus mutation is slowing down, so a vaccine is needed so that there is group immunity.	Pros
	REJECT Allah's destiny. If you want a vaccine, just vaccinate yourself...!!! #BeliefintheoneandonlyGod	Cons
	I trust Allah more than vaccines or anyone, be it officials or the president.	Cons
	People don't get covid, don't rely on vaccines.....pray a lot and surrender to Allah. Ikhtiar	Cons
	May we all be given health after being vaccinated.	Pros
	So Indonesia can see that I'm a commoner, I'm ready for a paid vaccine... it's just a vaccine.	Pros
	Who says vaccines are free, they are bought with state money.	Cons
	While still positive. I'm just begging for a vaccine, I want to be healthy.	Pros
	I'm lucky because I don't spend money to buy vaccines, there are still many people who want to be vaccinated.	Pros
	What happens after the vaccine, who is in charge of the government?	Cons

Source: Processed by Authors, 2021

Table 4.
Covid's Concordance

Word Type	Concordance	Trust / Distrust
Covid	No one in my village has Covid.	distrust
	Does Covid really exist? Can't believe it.	distrust
	Covid-19 will disappear soon we can avoid Covid-19, amen	trust
	This is a bright start for Indonesia free from the Covid 19 pandemic 🤲 🤲 Amen Yaa Robballalamiin Stay healthy always.	trust
	Cancel the vaccine. I'm not sure people exposed to covid are those who don't obey health protocols.	distrust
	People with lots of sins will also pray for safety from covid amen.. but they won't be safe from the law.	trust
	Parents must wear masks because of covid, school children are stupid, tired of studying online.	trust
	If vaccinated, will I be immune to COVID-19? do I no longer need to wear a mask?	distrust
	I've felt covid, don't be careless, be careful because covid really exists and it hurts excruciatingly.	trust
	All media will stop reporting the severity of covid.	distrust
	If you have been vaccinated, you can still transmit Covid. Vaccines are attenuated viruses.	trust
	Drink a lot, plus herbs. In the village of covid, we fight with kencur, ginger, turmeric, temulawak.	trust
	Every day the hospital is full due to covid patients.	trust
	street vendors support anything that can eliminate covid.	trust
	What's a good vaccine for covid circulating in Indonesia? Other countries have started vaccinations.	trust
	Get money, covid has a lot of budget. The most patented covid-19 medicine is praying to God.	distrust
	Already equipped with a strong immune to deal with covid. Have faith in our proven immunity.	trust
	About vaccines, he said vaccines don't solve covid even though it's been vaccinated, we still keep our distance.	distrust

Source: Processed by Authors, 2021

Covid's Concordance

The next concordance is Covid 19. This keyword is found in public comments on vaccine videos, both those who believe and do not believe in Covid 19.

The table above shows the distribution of comments regarding public trust and distrust in the existence of Covid-19. From these comments, people believe that there is a Covid 19 virus. People exposed to the virus invite other people to maintain their immunity and health protocols because they feel uncomfortable being exposed. Meanwhile, there are still many comments from people who do not believe in the Covid-19 virus. The public expresses this distrust because they think that no one in their area has been exposed to the COVID-19 virus.

Allah's Concordance

Religion is one of the elements that cause people to doubt vaccines in Indonesia. This is because the Indonesian people are religious people who hold fast to their beliefs. Many people's comments bring God (Allah) in every statement, people believe disease comes from Allah, and the cure is also from Allah.

These comments reveal human submission to Allah as a healer from all kinds of diseases. Humans need to try to avoid the dangers of the covid 19 virus, but all of these efforts are left to Allah. The community also invites to carry out vaccines as an effort to avoid the virus outbreak. In his comments, the community also invites people to pray, be grateful, be patient and think positively about the covid 19 pandemic.

Government

As a policymaker, the government has the duty to protect and maintain public safety and health from the dangers of the Covid-19 pandemic. Several public comments regarding the government are divided into two categories: public trust in the government and public distrust of the government.

Table 5.
Allah's Concordance

Word Type	Concordance	Trust / Distrust
Allah	May you always be healthy and always in the protection of Allah Amen.	trust
	I just hope that Allah will protect my body against this virus.	trust
	yg di makan dari hasil yg halal allah akan menjaga kekebalan tubuh dan akan mejaga What is eaten from halal results, Allah will maintain immunity and will protect us from viruses.	trust
	Ready to be vaccinated, whatever the risk, leave it to Allah, bismillah.	trust
	Insya Allah, it will heal. It's as if vaccines are like God.	trust
	The real vaccine is that it comes from Allah and we all Indonesian people have the right to believe.	trust
	Many blessings from disease and plague... God willing, it will be kept away and strengthened from the disease	trust
	May Allah protect us from all viral, fungal and bacterial infections. Masha Allah, Doctor, stay healthy... the best prayers.	trust
	Said that it has nothing to do with religion (Allah), now it is associated with religion (end of time).	trust
	Medicine is not everything... it is an intermediary when Allah allows us to heal.....	trust
	Whatever happens is God's will, so let's think positive, Insya Allah.	trust
	Allah told us to ikhtiar (effort).	trust
	After we try our best and Allah gives the opposite result, that's destiny.	trust
	Immunity is grateful, trying, patient, tawakkall, only Allah is the helper... Humans are not far from bacteria.	trust
	This virus is also a creature of Allah, if Allah doesn't allow it, it can't hurt us.	trust
	This virus also came by the will of Allah.	trust
	Allah who brings disease, Allah also heals.	trust

Source: Processed by Authors, 2021

Table 6.
Government's Concordance

Word Type	Concordance	Trust / Distrust
Government	Since a long time ago, it was also self-funding, why ask the government there is Allah is enough.	distrust
	Surely you know that the government's main task is to protect all the lives of its people.	trust
	Respect the confusion of the people, the government's job is to disseminate developments honestly.	trust
	Trust the government. If something goes wrong, the government's job is to correct it, not accuse it of hoaxes.	trust
	Just be healthy; dying is God's business, not the government.	distrust
	When it is your turn to catch the virus, you will ask the government for help... strangely, people have too many negative thoughts.	trust
	I agree with Fadli Zon, and if the government's way of communicating is good, the people will trust the government.	distrust
	Information from the government must be more robust than hoaxes. Spread information.	trust
	Information to the public so that every government policy can be known and understood by the public.	trust
	If you pay attention, social assistance is corrupted, and vaccines are made a fuss. The government can only say that it does not feel the suffering of the people.	distrust
	The lack of information caused by the government's failure to educate the public is HOAX	distrust
	Robbing its people with laws or government regulations from rapid test swab PCR now vaccines.	distrust
	Those who do not want to be vaccinated do not force it because the government is elected by the people now; they don't want it to be arbitrary.	distrust
	Causing some of the public to distrust the government; the way the government communicates must be improved.	distrust
	I don't want to be misinformed, please give clear and fast information from the government...	trust

Source: Processed by Authors, 2021

Several comments from the netizen towards the government, both the trust and distrust of the community towards the government, were found. Among them, if the government's communication method is suitable, the people will trust the government, robbing its people with laws or government regulations from rapid tests, PCR swabs, now vaccines; lack of information caused by the government's failure to educate the public is a hoax and other comments.

Discussion

The government has made various efforts and policies to protect the Indonesian people from the dangers of Covid-19. One of the policies that attracted the most public controversy at the beginning of its policy implementation was vaccination. The value of vaccination is undermined by the low level of public confidence in the Covid-19 vaccination. For this reason, this study aims to map the pros and cons of the Indonesian people against Covid-19 vaccination, especially at the beginning of the emergence and implementation of vaccines in Indonesia.

The results of the corpus analysis show that netizen comments on YouTube reveal some of the dominant discussion patterns. Beginning with the emergence of the Covid-19 disaster in Indonesia, there was so much controversy from the public. Some netizens expressed concern about the side effects of vaccination, such as allergic reactions, danger of death, and other reactions. In Indonesia, anti-vaccine groups have existed for several reasons, including using theological arguments to reject vaccination (Muallifah, 2018).

This public distrust also occurs due to the large amount of misinformation circulating regarding vaccination. Even though this vaccine is considered the most successful health measure, public doubts threaten this program. As stated (MacDonald et al., 2015), the doubt is influenced by self-satisfaction, comfort, and self-confidence. Recent health research shows that people refuse vaccines because they have not received good vaccination information (Wellcome, 2018).

The public considers that the government's ability to communicate policies regarding vaccination is still not good because people still trust the news circulating on social media regarding the dangers of the Covid-19 vaccination, plus there is no guarantee from the government that once the vaccine has been vaccinated, the public will no longer get Covid-19. This comment by the public's distrust of the government is due to the government's poor way of communicating with the community; the community feels that the government lacks empathy for the suffering of the people. The people also feel that the government is making policies that are detrimental to the people; several tests that determine whether a person is infected with the virus or not, namely rapid antibody, antigen, and swab PCR tests, are considered detrimental to the people; as is the case with the vaccine policy given, people are still unsure. Coupled with several cases of misuse of social assistance funds that have taken place, the public's trust in the government will seriously deal with the dangers of this pandemic.

Religious elements are also one of the causes of the phenomenon of doubt about vaccines in society, especially in Indonesia. Indonesian society is known as a religious society and still holds its culture very firmly. This makes the role of religious leaders essential in everyday life, especially in decision-making. The many keywords of religious actors prove this the public mentions in the Youtube video comment data. Rejection reactions to vaccines result from the meaning of symbols in the form of teachings in the holy book of the Qur'an regarding the concepts of halal and haram and the submission of creatures to God's predestination (Fauzi, 2017). Initially, as the halal certifying body for a product, the MUI (Indonesian Council of Religious Scholars) had not issued a halal certification for the Covid-19 vaccine. This is because the *MUI* is still investigating and

researching the ingredients contained in the Covid-19 vaccine. Although in the end, the MUI granted halal certification to the Sinovac vaccine brand, followed by a circular from the government regarding vaccine distribution.

On the other hand, some people supported the Covid-19 vaccination program at the beginning of its implementation. The public believes this vaccination is one of the best efforts the government can make to prevent the danger of the Covid-19 virus. This vaccination prevents transmission and prevents someone infected from experiencing bad symptoms due to being infected with the virus. Various studies have been conducted regarding vaccination; it has been proven that 27 life-threatening diseases, including influenza, measles, polio, and certain types of cancer, can be protected by vaccines (Hammond, 2020). When a vaccine is carried out, the body's immunity will increase, reducing the risk of getting a virus. Vaccines can also form multiple body groups, namely populations that are immune to disease, making it difficult for the virus to spread (Mooney, 2005).

Social media provides a new way to represent and measure public opinion. The public stage is now forming with social media, especially for conversation (Anstead & O'Loughlin, 2015). Social media provides a more comprehensive understanding of public opinion on specific topics in a more scientific way (X. Dong & Lian, 2021). The existence of conversations about COVID-19 vaccination on YouTube social media through the comments column must be handled seriously to educate the public about the misinformation circulating. Public apathy towards the COVID-19 vaccine will emerge if misinformation is not handled thoughtfully. Because social media offers a more time-sensitive channel to obtain and measure public sentiment towards specific policies and events about opinions posted when a policy is issued and an event occurs is recorded on the platform and cannot be changed (McGregor, 2019).

The existence of public opinion data via social media can provide knowledge to health policymakers and information providers to adopt evidence-based policies on public opinion regarding COVID-19 vaccination. Public trust in COVID-19 vaccination is an essential foundation as a step for widespread vaccine distribution. The public should trust official sources of information that come from health institutions or international organizations. If the government can build good communication, it can undoubtedly build public trust in the safety and effectiveness of vaccination. The public also tends to have more trust in respected figures. Therefore, the government's role in involving figures in conducting outreach, such as doctors, religious figures, and public figures, can help increase public confidence in COVID-19 vaccination. In order to build public trust, the government must also ensure transparency in providing data related to clinical trials, safety and the effects of vaccination. If this data is explained, the public will be more confident that the government is committed to providing honest and accurate information. Apart from that, the government is also expected to be able to campaign for a more effective communication strategy to disseminate information about vaccination so that the public gets clear and accurate information and so that there is no doubt about implementing it.

Conclusion

The research findings show the diversity and complexity of people's views in the early days of the Government of the Republic of Indonesia discussing COVID-19 vaccination. Various public arguments regarding COVID-19 vaccination in Indonesia, starting from the beginning of the emergence of COVID-19 vaccination in Indonesia, have generated much controversy in society. This mistrust occurs due to the large amount of misinformation circulating on social media regarding vaccination. However, some people also

believe in and support the Covid-19 vaccination program. This is because the public considers vaccination to be one of the best efforts the government can take to prevent the danger of the spread of the Covid-19 virus. Public trust in official and accurate information, the role of community leaders as opinion leaders, data transparency, and effective public communication from health authorities and the government are key factors in forming a positive view of vaccination. On the other hand, if misinformation is not handled seriously, opinions, apathy, and even public rejection of the COVID-19 vaccine will emerge.

This research contributes to filling the gap regarding the public's views on COVID-19 vaccination in the early days of vaccine distribution. In this context, the Government of the Republic of Indonesia has not required the public to vaccinate. By understanding and mapping emerging public views regarding society's rejection and acceptance of vaccines, the government can design strategies and overcome misinformation about vaccines spreading in society so that public concerns are answered. The promotion of vaccine acceptance can be wider. The government can use public opinion to design appropriate and accurate educational messages; reading and responding to negative comments on social media can help clarify information and educate the public. Vaccine promotion campaigns can also be carried out by providing vaccine success stories and testimonials from people who have been vaccinated. The government must also be open to providing information about vaccination, including data on vaccine ingredients and safety, to build public trust. The community's response will strengthen the sustainability and success of the vaccination program and the overall handling of the pandemic. Advertising education campaigns can focus on areas of great concern, such as side effects, safety, benefits of vaccination, and the spread of fake news.

The limitation of this research is the limited data source, where this research only focuses on comments from the five YouTube videos with the most viewers. Meanwhile, public views regarding vaccination on other social media channels were not included for analysis. This makes the picture of people's views regarding vaccines incomplete. Our recommendation for future research is that more representative data is needed by expanding the sample and taking public comments from other social media channels to make the findings more comprehensive. On the other hand, an in-depth understanding of the social, political, and cultural context is also needed to provide additional insight into the factors influencing people's views on vaccines.

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