A Corpus-Assisted Critical Discourse Analysis of COVID-19 Vaccination-Related News Discourse in the Malaysian Mainstream Media

NADHRATUNNAIM ABAS
Akademi Pengajian Bahasa
Universiti Teknologi MARA
Cawangan Pahang, Malaysia
nadhra@uitm.edu.my

ROSLINA ABDUL AZIZ
Akademi Pengajian Bahasa
Universiti Teknologi MARA
Cawangan Pahang, Malaysia

SYAMIMI TURIMAN
Akademi Pengajian Bahasa
Universiti Teknologi MARA Shah Alam, Malaysia

NOR SHIDRAH MAT DAUD
Akademi Pengajian Bahasa
Universiti Teknologi MARA Shah Alam, Malaysia

ABSTRACT

The deadly impact of COVID-19 has caused authorities worldwide to resort to vaccination as an exit strategy. Some have even imposed vaccination as a mandatory policy to ensure social compliance. Many studies have focused on the issues of discrimination and polarisation due to the virus and the vaccines, but very little is known about vaccination as a process of generating compliance, especially in the Malaysian context. Hence, the paper aims to address this gap by examining how COVID-19 vaccination is discursively profiled in the Malaysian mainstream media. The study utilised corpus analysis and Discourse-Historical Approach (DHA) of Critical Discourse Analysis (CDA) in examining the corpus of 1514 vaccination-related news reports in the Malaysian mainstream media amounting to approximately 924028 tokens. Through the discursive strategies of referential/nomination and predication, the findings indicated that vaccination was strongly affiliated with those representing the government and its ideology. To generate compliance, vaccination was described as synonymous with the national agenda. Hence, vaccination was dominantly assigned positive labels that promoted this ideology, except for the very few negative labels attributed to the mandatory policy, the effects of vaccination and the deadly impact of COVID-19 infection. The study not only contributes to the vast literature on COVID-19 but it also provides a linguistic analysis that combines corpus techniques and CDA to examine a discursive practice that can further pave the way for uncovering the ideological discourse in the mainstream media.

Keywords: Corpus-assisted analysis; Discourse-Historical Approach; COVID-19 Vaccination; news discourse; mainstream media

INTRODUCTION

The newness of the novel coronavirus COVID-19 has captured huge interest in the latest updates on the pandemic that has affected the world population, making it one of the most sought-after news stories. As a countermeasure against the alarming rates of infections and mortality, many countries, including Malaysia, have imposed a series of lockdowns beginning on March 18 2020. As the lockdown ceased to curb the rising numbers, vaccination has been perceived as an exit strategy. Starting in February 2021, the National COVID-19 Immunisation Programme has been launched throughout Malaysia. Nonetheless, as COVID-19 is a new virus, so were the vaccines created to fight against it. Thus, whenever vaccination is mentioned, it also concerns the vaccines used in the process.

The present study is concerned with how vaccination-related information is communicated in the mainstream media as the main source of information, which can construct the audience's perceptions and further influence their decision on whether or not to get vaccinated. A number of studies have consistently identified the discourse concerning COVID-19 as ideological, such as in Thailand news media (Laongpol, 2021) and the political speech of the Australian Prime Minister (Alyeksyeyeva et al., 2021). Within the Malaysian context, the mainstream media was perceived as large organisations affiliated with and controlled by the dominant political coalition, Barisan Nasional (BN), specifically the United Malay National Organisation (UMNO) and the Malaysian Chinese Association (MCA) (George, 2007). *The Star, New Straits Times, The Sun, Utusan Malaysia* and *Berita Harian* were among those identified as mainstream media due to their ability to reach a mass audience besides being the mouthpiece of BN as the ruling party (George, 2007; Keong, 2017; Rajaratnam, 2009). Hence, the aim was to release positive stories that were in support of the owners' ideology (Rajaratnam, 2009). Broudy and Hoop (2021) observed that the mainstream media were entrusted to serve the interests of the political elite by launching a global war campaign on COVID-19 that insisted on public compliance. Similarly, the Russian media has also promoted vaccination among its audience as a way to curb the spread of the virus (Stepanov & Komendantova, 2022).

Most studies on COVID-19 vaccination discourse in the media were often concerned about the vaccines used. In Malaysia, studies on COVID-19 vaccination indicated vaccine hesitancy (Mohamed et al., 2023; Vaithilingam et al., 2023). Besides, they have also examined the factors that contribute to vaccine acceptance (see Lau et al., 2021; Marzo et al., 2022; Syed Alwi et al., 2021). Further, the concerns towards the vaccines remain to be explored in terms of the Malaysians' perceptions (Chai, 2023) and sentiments (Wong et al., 2023) on social media. A corpus-based study on COVID-19 also concentrated on how the vaccines were framed in Malaysian newspapers (Malik et al., 2023). What these studies have in common is that they were more interested in the vaccines used rather than in the discourse of vaccination as a policy in the mainstream media. Additionally, they have yet to consider COVID-19 vaccination as a discursive event that can be analysed linguistically. Against this backdrop, the present study aims to examine how COVID-19 vaccination is discursively profiled in the Malaysian mainstream media by addressing the following questions:

1.   What are the references and names assigned to vaccination in the mainstream media?
2.   What are the traits, characteristics, qualities, and features that describe vaccination?

LITERATURE REVIEW

DISCOURSE-HISTORICAL APPROACH (DHA)

According to Wodak (2001), DHA serves the aim of Critical Discourse Analysis (CDA), which views language as a form of social practice that communicates ideology, dominance and manipulation. It adopts a discourse-analytical approach which addresses the reproduction of social power and inequality in the discourse. This can be seen in several instances of media discourse, which is governed by gatekeepers and those in power (see Broudy & Hoop, 2021; Nyanoti, 2022; Rajaratnam, 2009). The notion of 'history' represents the discourse that is synchronically and diachronically related to certain communicative events in the present and (or) past times. DHA incorporates various theories and methods as it accords to the socio-philosophical design of the critical theory through the notions of social critique and triangulated 'context'. Wodak (2001) further explained that social critique is crystallised through text or discourse-imminent critique (text- or discourse-internal structures), socio-diagnostic critique (context), and prognostic critique (transformation and improvement of communication). DHA is triangulatory as it adheres to the notion of 'context' that covers the text and co-text intertextually and interdiscursively, extralinguistic features and socio-political and historical contexts relating to the discursive practices (Wodak, 2001, p. 67).

DHA has been applied to the analysis of the discursive constructions of 'Us' and 'Others' in political and discriminatory discourses, particularly in the Austrian contexts of prejudiced anti-semitism, discriminated immigrants and accentuated sameness and differences of the nation and national identity in the media. These discursive events can be explored based on the analytical categories of DHA as specified in Figure 1.

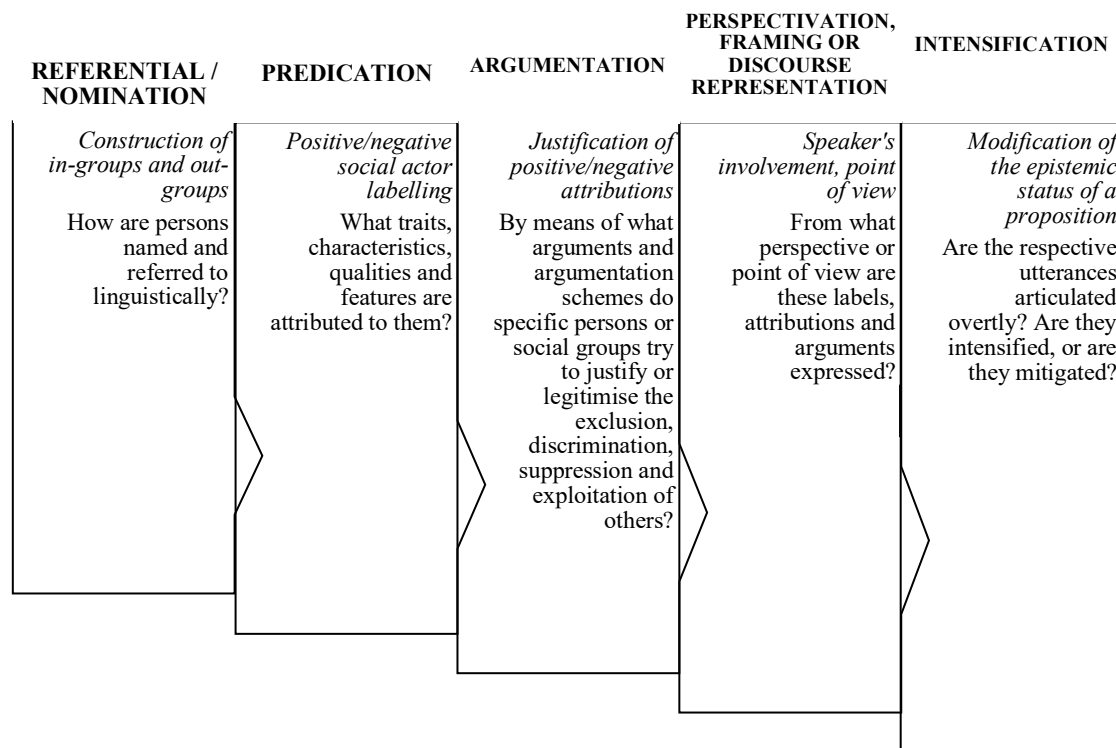| REFERENTIAL / NOMINATION	PREDICATION	ARGUMENTATION	PERSPECTIVATION, FRAMING OR DISCOURSE REPRESENTATION	INTENSIFICATION
Construction of in-groups and out-groups How are persons named and referred to linguistically?	*Positive/negative social actor labelling* What traits, characteristics, qualities and features are attributed to them?	*Justification of positive/negative attributions* By means of what arguments and argumentation schemes do specific persons or social groups try to justify or legitimise the exclusion, discrimination, suppression and exploitation of others?	*Speaker's involvement, point of view* From what perspective or point of view are these labels, attributions and arguments expressed?	*Modification of the epistemic status of a proposition* Are the respective utterances articulated overtly? Are they intensified, or are they mitigated?

FIGURE 1. Analytical categories of DHA (Wodak, 2001, pp. 72-73)

Wodak (2001) elaborated that each discursive strategy functions to unravel the manifestation of social inequality by, firstly, obtaining information on the constructions of in-groups and out-groups through references and names, which may denote positive and (or) negative labelling. Next, DHA will look at how the positive and/or negative labels are justified by taking into account the trajectory of the perspective or point of view. Finally, it will also examine how the view is expressed, whether or not it is intensified or simply mitigated. The analysis of these discursive strategies will contribute to a comprehensive investigation and offer a detailed insight into the dialectical relationship between discourse and discursive practices.

PAST STUDIES

DHA has always been concerned about the construction of 'Us' and 'Others' in relation to discursive events such as the Arab Spring (Adel, 2020) and the emergence of refugees (Erdogan-Ozturk & Isik-Guler, 2020). Similarly, COVID-19, the pandemic of the century, is an event that has enriched media discourse. Research on the discourse of COVID-19 has revealed instances of polarisation, particularly in the references to the virus itself as the 'Chinese virus', 'Wuhan virus' (Yeh, 2021; Yu et al., 2021) or 'foreign virus' (AlAfnan, 2020; Ivić & Petrović, 2020) which have incited prejudiced discourse on a certain country or nationality, specifically China and the Chinese (Sun, 2021; Wang, 2021) through DHA (Jinshuang & Rong, 2021). Past studies have shown that COVID-19 vaccination has been framed as a part of the vaccines. In other words, vaccination has been discussed interchangeably with vaccines and vice versa. Due to the novel coronavirus, the use of vaccines in Malaysia has been met with hesitancy (Mohamed et al., 2023; Vaithilingam et al., 2023) although several studies also reported acceptance (Lau et al., 2021; Marzo et al., 2022). Unfortunately, these studies in the Malaysian context lack the linguistic analysis of the vaccine-related discourse in the mainstream media.

In terms of language analysis, not many studies on COVID-19 vaccination are observed to have adopted corpus analysis and CDA, specifically DHA, to examine the data. Those that employed the discursive strategies in DHA concern identity construction in the case of China, the reported birthplace of COVID-19 (Yang & Chen, 2021), which were compared with the image portrayed in the American media (Jinshuang & Rong, 2021). Other studies, such as those that concern the virus itself, used other CDA approaches. Yu et al. (2021), for instance, combined the corpus approach with Fairclough's three-dimensional model of CDA in the comparison of the news reports on COVID-19 between China and the United Kingdom. Xia et al. (2022) used corpus-based analysis of the contextual collocation of vaccine concordance lists to study the public's attitudes towards coronavirus vaccines. Abbas (2021) utilised van Dijk's ideological polarisation strategies in the analysis of the biased media representation of locally produced and foreign-based vaccines in the case of China versus America. Using van Dijk's ideological manipulation strategies, Al Mamoori and Kareem (2022) examined vaccination scepticism in American newspapers.

Overall, despite the numerous research addressing opinions and concerns in the media about COVID-19 as the virus, the vaccines and vaccination, many of these studies have been more interested in retrieving the various stances and themes through content or thematic analysis. Those that utilised CDA are only limited to the analysis pertaining to the virus or the vaccines. Further, the deconstruction of ideologies representing the mainstream media on the vaccines or vaccination based on DHA, especially in the Malaysian context, has yet to be addressed in this vast literature on COVID-19.

METHODOLOGY

CORPUS DATA

The corpus data comprise online news reports mined from the six news media in Malaysia dated from March 2020 to June 2021, which coincides with a series of national quarantine measures implemented by the federal government, Movement Control Order (MCO) starting from March 18, 2022, to May 3 2020, followed by Conditional Movement Control Order (CMCO) from May 4 to June 9 2022 and Recovery Movement Control Order (RMCO) from June 10 2020 to March 31 2021. The terms "vaccination", "COVID-19", "vaccines", and "vaccinated" were used as the search keywords in identifying and selecting possible COVID-19 vaccination-related news reports from different sections of the news media, including local and world news, columnist, opinion, sports, business, lifestyle, health, and travel.

Python Programming was used to scrape data from news media websites. Using Python, large amounts of data can be extracted from websites and stored in a structured form. It consists of powerful libraries such as Beautiful Soup and Scrapy that facilitate web scraping. These libraries enable the extraction of relevant data from websites and online sources to be administered with ease. For the purpose of this research, Beautiful Soup was utilised for data scraping. Beautiful Soup is a simpler and more lightweight library focused on parsing and extracting data from HTML or XML documents. Since the research project requires only basic web scraping functionality and does not involve complex crawling scenarios, Beautiful Soup was deemed more suitable.

The data collection process began by identifying the target websites. Six news media websites were identified as the primary sources for the online news reports, namely *The Sun, The Star, News Straits Times, Malay Mail, Borneo Post* and *BERNAMA*. The time frame was set from March 2020 to June 2021. The next step involved defining the search keywords. The terms "vaccination," "COVID-19," "vaccines," and "vaccinated" were used as the search keywords. Using the Beautiful Soup library, the extraction of relevant news articles was administered. The web scraping code was designed to search and extract the COVID-19 vaccination-related news reports from the identified sections of the news media websites. The extracted data included the article content, publication date, and any additional metadata deemed relevant for analysis. The extracted data were then stored in .txt format for data analysis.

There are altogether 1514 related news reports compiled, amounting to approximately 924028 tokens. Table 1 below displays the composition of the Malaysian Corpus of Vaccination (M-CorVax), which houses COVID-19 vaccination-related news reports in Malaysia.

TABLE 1.   Description of the corpus

News Media	No of Files	No of Tokens
The Sun	292	174003
The Star	236	115613
News Straits Times	549	304846
Malay Mail	296	258278
Borneo Post	91	52284
BERNAMA	50	19004
TOTAL	1514	924028

COMPUTATIONAL TOOL

This study used LancsBox v.6.x. (Brezina et al., 2021) to analyse the corpus data. It is a new-generation software suite for linguistic data and corpus analysis developed by Lancaster University. The software is equipped with five major modules (tools): KWIC (Concordances), Whelk (Distribution of search words within corpora), GraphColl (Identifies and visualises collocations), Words (Wordlist), and Text (Displays full context of search terms). For this study, Words was used to generate the wordlist, while GraphColl was used to analyse the collocation of the node *vaccination*.

CORPUS ANALYSIS PROCEDURES

The references for the node *vaccination* were ascertained by the collocation analysis to obtain the collocation patterns. The minimal Mutual Information (MI Score) was set at 3.0 with a cut-off of 20 times in the corpus and within the 5-5 window span. The MI Score of 3.0 and above indicates the collocations of the node words (Xiao & McEnery, 2006). The collocation analysis identified the terms that co-occur with the node (*vaccination*) hence revealing the references assigned to it. Meanwhile, the naming patterns of *vaccination* were derived with the aid of the Words tool in LancsBox. Using the Words tool, the wordlist for the corpus was generated (refer to Appendix A). Then, the wordlist was manually examined for synonyms of the term *vaccination* in the corpus data. These synonyms were used as alternative linguistic expressions for referring to vaccination within the corpus. Once the list of synonyms was established, the concordances of each synonym were examined to discern whether they carried positive or negative meanings in relation to the concept of vaccination.

CRITICAL DISCOURSE ANALYSIS

The present study utilised Wodak's (2001) two discursive strategies in DHA, which are referential/ nomination and predication, as specified in Figure 2, to unveil the linguistic manifestation of the discursive profiling of COVID-19 vaccination. This is to further see how the policy is enacted in the discourse of the mainstream media that may ideologically be aligned with those in power. The focus on certain DHA strategies has been apparent in several past studies that aimed to identify the binaries in the actor representation (see Adel, 2020; Erdogan-Ozturk & Isik-Guler, 2020).

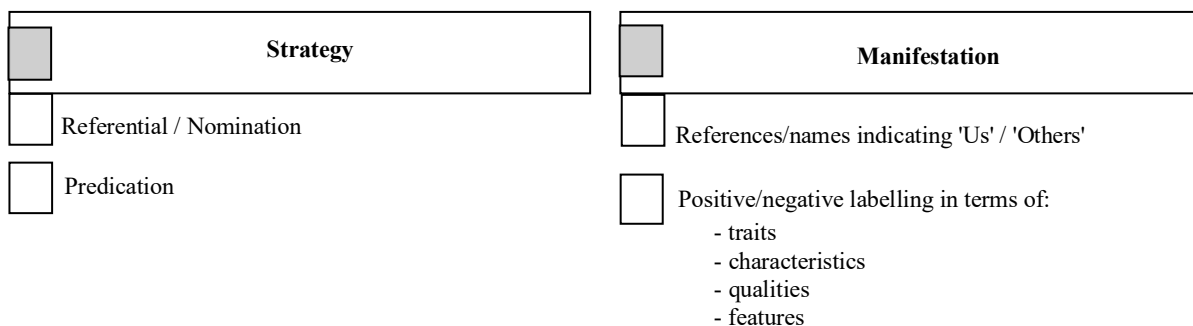| Strategy	Manifestation
Referential / Nomination	References/names indicating 'Us' / 'Others'
Predication	Positive/negative labelling in terms of: - traits - characteristics - qualities - features

FIGURE 2. Analysis of discursive strategies (Wodak, 2001)

The referential / nomination strategy explains how the references and names assigned to vaccination can contribute to the construction of in-group ('Us') and (or) out-group ('Them' / 'Others'). Next, the predication strategy, which concerns the characteristics, features and traits assigned to vaccination, elaborates on how they are positively and (or) negatively labelled. This way, the analysis can preliminarily identify whether or not vaccination as the discursive event is depicted positively or negatively through its network of associations with any actors or groups as constructed by the ideologies of the discourse producers.

RESULTS AND DISCUSSION

REFERENTIAL/ NOMINATION

This section explains the referential/nomination strategy employed in the reporting of vaccination-related news, which describes how people, phenomena, objects, actions, processes and events are named and referred to linguistically.

REFERENCING PATTERNS

Results from the collocation analysis of *vaccination* were examined to determine if the term bears a connection with specific participants. Only collocations with an MI score of 3.0 and above were taken into consideration as evidence that two items are collocated. A threshold of 3.0 is viewed as indicating a 'strong' collocate (Hunston, 2002, pp. 71-72). A 'higher MI-score values tend to favour units with a high level of semantic and structural unity' (Gablasova et al., 2017, p. 173). Table 2 below summarises the findings.

TABLE 2. Collocations of vaccination with references to participants

Pattern	Position	Collocate	MI	Freq (coll.)	Freq (corpus)
Social groups	R	elderly	4.77	26	206
	R	children	4.24	20	230
	R	frontline	4.19	49	583
	L	moh	3.94	30	422
	R	population	3.84	64	970
	L	governments	3.79	20	314
	L	public	3.77	90	1424
	L	workers	3.61	41	727
	R	Malaysians	3.60	43	770
	R	citizens	3.58	25	452
	L	country	3.46	73	1432
	R	Ministry	3.35	59	1251
	L	community	3.32	23	500
	M	committee	3.21	22	515
	L	government	3.20	117	2748
	L	world	3.16	43	1040
	L	people	3.08	103	2647
Social actors	L	Muhyiddin	3.36	31	653
	R	Khairy	3.01	46	1241
Nonhuman	L	mass	6.88	117	215
	R	exercise	6.75	110	221
	R	PPV	6.12	44	137
	R	centre	6.11	191	597

R	drive	6.07	46	148
R	programme	6.03	665	2210
R	campaign	5.99	49	167
R	programmes	5.92	51	183
R	process	5.79	147	577
R	appointments	5.76	58	232
L	mandatory	5.69	24	101
L	registration	5.65	130	562
R	plan	5.53	122	572
R	mysejahtera	5.36	104	547

As shown in Table 2, the social groups that frequently collocate with *vaccination* include *the elderly*, *children* and *frontliners*, producing concordances such as "national vaccination exercise which prioritises the elderly", "vaccination for COVID-19 frontliners", and "studies are now being conducted on COVID-19 vaccination in children". These social groups are among the most vulnerable to the COVID-19 virus. The elderly and frontliners strongly collocate with *vaccination* as they were among the first groups scheduled to receive the COVID-19 vaccination. Although children were not on the list of the first receivers of the COVID-19 vaccine, reports pertaining to studies on the development of COVID-19 vaccines for children are also central in the news reports.

The collocation analysis also reveals that *vaccination* collocates with *government/governments* and has the specific reference MOH-acronym of the Ministry of Health and *ministry*, which is another reference to the Ministry of Health. Both government(s) and MOH had wide coverage in the news reports as they play pivotal roles in enforcing and implementing government policies, strategies, and measures as well as countermeasures (Movement Control Order, health screening, COVID-19 Fund, etc.) in minimising the spread of COVID-19 and cushioning the impacts of COVID-19 on the citizen's economic, social, physical as well as emotional well-being.

Another social group with an MI score higher than 3.0 is Malaysian people, which is represented by the terms *population*, *public*, *Malaysian(s)*, *citizens*, *community*, and *people* in the news reports. The government's campaign for the COVID-19 National Immunisation Programme was directed at Malaysian citizens, and the mainstream media was observed to be deployed to disseminate and reinforce the campaign with the eventuality of achieving public compliance (Broudy & Hoop, 2021).

As for social actors, *vaccination*, as seen in Table 2, collocates with two prominent political figures in Malaysia who were leading the country's efforts to fight COVID-19: Tan Sri Muhyiddin Yassin, the then the Prime Minister of Malaysia and Khairy Jamaluddin, who served as the Coordinating Minister of the COVID-19 National Immunisation Programme (PICK) from February 2021 to August 2021.

The term *vaccination* also tends to co-occur with the words that refer to phenomena, objects, actions, processes and events which are categorised as nonhuman, such as *centre(s), exercise, PPV, drive, programme(s), process,* and *appointments* all of which have specific reference to the National COVID-19 Immunisation campaign. Much of the focus of the news reports in the corpus is on disseminating information on the government's campaign to implement mass vaccination exercise as a preventive measure to protect the public against the spread of the COVID-19 virus, at the same time addressing the public's fears of their safety and well-being.

Interestingly, these words also refer to the vaccination process, beginning with registering and securing appointments for the vaccination via Malaysia's *MySejahtera* App to selecting the vaccination *centres*, also known as 'PPV' (Pusat Pemberian Vaksin in Malay, which translates to

Vaccination Administration Centres). Further, they also indicated the government's efforts in ensuring the success of the vaccination drive by promoting it via campaigns and providing mass vaccination centres.

NAMING PATTERN

As can be seen in Table 3, linguistically, the naming pattern of *vaccination* in the news media reports indicates the use of synonyms, namely *immunisation* (1639), *doses* (1432), *dose* (609) and *shots* (226). The news media adopted common neutral replacements for *vaccination*, and further examination of the wordlist did not reveal any negative naming patterns of the node.

TABLE 3. The naming pattern of *vaccination*

Pattern		Freq
Synonym	immunisation	1639
	doses	1432
	dose	609
	shots	226

Immunisation was used most frequently, and the concordances of the node reveal it is designated to the National COVID-19 Immunisation Programme/Plan or National COVID-19 Immunisation Task Force. *Vaccination* and *immunisation* were used interchangeably when referring to national vaccination/immunisation programmes, as exemplified by the extracts below:

1. Commenting on the **National Vaccination Plan** which would be finalised this Thursday and scheduled to start in February, he said it would be presented to Prime Minister Tan Sri Muhyiddin Yassin next Monday before being presented to the Cabinet on Wednesday.
    (January 5, 2021. Govt to discuss free vaccination for foreign workers expatriates. *BERNAMA*)

2. The **National COVID-19 Immunisation Programme** was officially launched on February 24 when Prime Minister Tan Sri Muhyiddin Yassin received the first dose of the Pfizer-BioNTech vaccine at the Putrajaya health office.
    (March 4, 2021. Tok Pa: Vaccination programme to restore business confidence in Malaysia. *New Straits Times*)

The referential / nomination strategy unveils how *vaccination* in the mainstream media is communicated as a national agenda which is synonymous with the ideology of the government. The term *immunisation* foregrounds the effort to boost the immune system rather than entirely focused on getting the vaccine. Further, *vaccination* is also closely affiliated with those representing the government and its stakeholders, from the prioritised groups (elderly, children, frontliners) to the general public. Since these are the only groups of actors mentioned in relation to vaccination, the binary of 'Us' and 'Them / Others' has not been made apparent. The same role of the mainstream media in the context of COVID-19 containment can be seen in Nyanoti's (2022) report on Kenya's mainstream media that supported the dominant government ideology. Similarly, Stepanov and Komendantova (2022) mentioned the Russian media policy that supported vaccination as a way to curb the spread of the virus.

PREDICATION

The second strategy that was examined in this study is the predication strategy through the characteristics, features, and traits of vaccination and how they were positively and (or) negatively labelled. The concordance tool of LancsBox was used to further discuss the labelling of *vaccination* in the local newspapers.

POSITIVE LABELLING

Based on the collocational analysis results, the top five positive labelling of *vaccination* are taken to illustrate the point, which includes *successful, biggest, largest, effective, and available*. The frequency of use of these words is shown in Table 4 below:

TABLE 4. Positive collocation of *vaccination*

Word	MI	Freq (coll.)	Freq (corpus)
successful	5.92	33	118
biggest	5.86	32	119
largest	5.34	23	123
effective	3.53	21	393
available	3.50	24	460

As seen in Table 4, *successful* (33) and *biggest* (32) are the two words that were found to collocate with *vaccination* as the searched word in context, followed by *largest* (23), *effective* (21) and *available* (24). These words were explored further to gain a deeper understanding of how they were used in context by observing the concordance lines. Some examples of the concordance lines of *success* are presented as follows:

3. A **successful** *vaccination* programme will become a saviour, not only to the rakyat's life but also to heal the socio-economic impacts caused by the pandemic.
   (Muhammad 'Aamil Azhar. February 13, 2021. Covid-19 vaccination: A shot in the arm, a hope for socio-economy. *Malay Mail*)

4. A **successful** *vaccination* programme rollout and the eventual herd immunity to be achieved tentatively by the first quarter of next year would mean that consumer and business confidence should improve as the rate of infection could be reduced over time, he said.
   (February 17, 2021. National vaccination programme key to economic, financial recovery, say economists. *BERNAMA*)

5. By incorporating multiple immunisation strategies through public oversight, strong partnerships and community involvement in immunisation, the Malaysian government would be capable of implementing a **successful** *vaccination* drive, building greater public confidence in vaccination.
   (Amanda Yeo. March 9, 2021. Immunisation strategies are key to success. *The Sun*)

The examples above illustrate the positive outlook towards the implementation of the vaccination programme in Malaysia. According to Syed Alwi et al. (2021), there is a high rate of acceptance of the COVID-19 vaccine among Malaysians, which implies that the Malaysian government and other agencies should increase their campaign and prepare to implement the

COVID-19 mass immunisation program in the country. The findings of the present study demonstrated that the news discourse on vaccination programmes is generally in favour of its implementation in hopes of healing the socio-economic impacts caused by the pandemic, achieving herd immunity and building greater public confidence in vaccination.

Next, the concordance lines of *biggest* and *largest* were examined and are presented in the following:

6. On February 4, the Prime Minister said that the National COVID-19 Immunisation Programme would be the **biggest** *vaccination* effort ever implemented in Malaysia.
   (February 15, 2021. Guidebook on National COVID-19 Immunisation Programme to be launched on Tuesday. *BERNAMA*)

7. This is the **biggest**-ever *vaccination* campaign in the country that involves everybody, without exception.
   (Muhammad 'Aamil Azhar. February 13, 2021. Covid-19 vaccination: A shot in the arm, a hope for socio-economy. *Malay Mail*).

8. Malaysia will create history by rolling out the country's **biggest** *vaccination* exercise ever, known as the National Covid-19 Vaccination Programme, tomorrow, two days ahead of the schedule.
   (February 23, 2021. Health Ministry was assessing whether ex-Covid-19 patients require vaccination. *BERNAMA*)

9. The country is expected to need a year to achieve herd immunity for the coronavirus through the National COVID-19 Immunisation Plan, one of the **largest** *vaccination* programmes in Malaysia.
   (February 8, 2021. Covid-19 vaccine: One year four country to achieve herd immunity, say scientists. *Malay Mail*).

10. After February, the COVID-19 National Immunisation programme will become one of the **largest** *vaccination* exercises in Malaysia.
    (February 8, 2021. Covid-19 vaccine: One year four country to achieve herd immunity, say scientists. *Malay Mail*)

It was observed that the collocates *biggest* and *largest* referred to the National COVID-19 Immunisation Programme in Malaysia. Interestingly, the newspapers used different terms to refer to the immunisation programme, such as *effort, campaign, exercise,* and *programmes*. This indicates the uniformity in positively depicting vaccination as an initiative to save people from the virus. Additionally, it generally shows that corpus techniques are able to bring out the patterns of word use in national newspapers that demonstrate how certain words are employed to refer to the same context, in this case, the immunisation programme.

The fourth and fifth positive collocations of *vaccination* are *effective* and *available*. The concordance lines are as follows:

11. They said that Putrajaya must also compose a comprehensive framework to increase collaboration between public and private sectors to ensure faster and more **effective** rollout of the *vaccination* plan to achieve herd immunity as fast as possible.
    (March 5, 2021. DAP backs national COVID-19 vaccination but urges Khairy to finetune programme for smoother rollout. *Malay Mail*)

12. He said with the increasing prospect of **effective** COVID-19 *vaccination* this year, there is optimum that the property market will see a turning point soon.
    (February 8, 2021. Chin Hin aiming to develop projects with GDV of RM3.7 billion in the next two years. *The Sun*)

13. Dr Boo pointed out that the Covid-19s much lower death rate and insidious clinical presentation have made policy-makers less vigilant on the necessity of early control measures and the development of **effective** *vaccination* strategies.
   (December 29, 2020. Johor DAP Dr Boo says Malaysia missed out on the opportunity to test Covid-19 vaccines. *Malay Mail*)

The National COVID-19 Immunisation Program (NIP) started in February 2021, beginning with phase one, which involved healthcare workers and frontliners. Around this time, the public was exposed to various misinformation and unsubstantiated rumours regarding the COVID-19 vaccines, particularly those shared on social media platforms (Mohamed et al., 2021). Hence, it is quite reasonable to see that the words *effective* and *available* are the characteristics of vaccinations that are of the newspapers' concern. The government was urged/pressured to ensure a faster and more effective rollout of the vaccination plan and to continue to develop effective vaccination strategies. At the same time, the news also covered the positive outlook of the property market, hoping for a turning point with the increasing prospect of effective COVID-19 vaccination. Examples (11), (12) and (13) generally illustrate the hope for an effective vaccination programme in Malaysia.

Another concern regarding the vaccination programme is its availability. The following illustrate the concordance lines of the word *available* with *vaccination* as the search word.

14. "When *vaccinations* are **available** to a broader public, we hope Olympic and Paralympic teams will be vaccinated given their role as ambassadors of their National Olympic (NOC) and National Paralympic (IPC) Committees."
   (Fadhli Ishak. February 14, 2021. No mandatory vaccination for Tokyo-bound athletes. *New Straits Times*)

15. As we know, there is no specific law that (Covid-19) *vaccination* (when **available** in the market) is mandatory. So, we have to move within the legal framework.
   (December 17, 2020. Mass Covid-19 vaccination is necessary to curb the spread of the virus, say religious leaders. *Malay Mail*)

16. He believes the government will only be able to make an educated judgement on its efficacy after four to six months of making Covid-19 *vaccinations* **available**.
   (January 14, 2021. Keep the mask on. *The Sun*)

While all three examples include the word *available*, it can be observed that these examples discuss vaccination from different perspectives. Example (14) shows the concerns of the International Olympic Committee (IOC) regarding the vaccination for their athletes. Meanwhile, Example (15) refers to the news report following the public debate regarding the necessity of vaccination from the religious / Islamic point of view. Finally, Example (16) is an excerpt of the Malaysian Medical Association (MMA) president, Prof Datuk Dr. M. Subramaniam's response to the efficacy of the COVID-19 vaccines. These examples further support the notion that the word *vaccination* has been perceived positively in the local news reports, mainly regarding its accessibility to the public.

The list of collocations further revealed that there are very few words that presented negative labelling of vaccination, as seen in Table 5.

TABLE 5. Negative collocation of *vaccination*

Word	MI	Freq (coll.)	Freq (corpus)
mandatory	5.69	24	191
expected	3.51	40	761

The following examples from the corpus illustrate how *mandatory* is used in context.

17. Dr Khoo, however, did not agree with **mandatory** *vaccinations* (for Covid-19) by law for now.
    (January 6, 2021. Use time until COVID-19 vaccines arrive to educate and inform the public medical experts and urge govt. *Malay Mail*)

18. If that final approach is **mandatory** *vaccination*, which requires all citizens to receive the vaccine unless they are clearly unable to receive it, like a previous severe allergy to a vaccine, he said.
    (March 6, 2021. COVID-19 vaccination: Could opt-out model speed sign-up rates in Malaysia? Health experts raise ethical concerns and prefer voluntary opt-in. *Malay Mail*).

19. That's why we feel applying penalties and **mandatory** *vaccination* must be implemented once all voluntary avenues like online registration, by MySejahtera or doing face-to-face appointments fail, he said during a press conference today.
    (May 27, 2021. MoH mulling fines mandatory jabs to ensure Malaysians turn up for their COVID-19 vaccine appointments. *Malay Mail*).

In Example (17), a medical practitioner, *Dr Khoo*, commented on the one-third of Malaysians who distrust the vaccine. He mentioned that mandatory vaccination would not help get them to vaccinate. Considering that the COVID-19 vaccines are new, there is a legitimate concern for consuming them. Hence, using the law to force the public to comply might not work. Instead, the government should educate and raise awareness. Meanwhile, Example (18) describes the word *mandatory* as a recommendation to the government to have mandatory vaccination as the final approach if Malaysia fails to achieve adequate vaccination coverage rates. Finally, Example (19) is an excerpt from an online press conference by the then Minister of Health, Dr Adham Baba, when addressing a report that mentioned more than 50,000 individuals had missed their appointments nationwide. It can be observed that in Example (19), *vaccination* is associated with *mandatory*, and it is not surprising to have the statement coming from the government in their effort to ensure that Malaysians adhere to their vaccination appointments. Although *mandatory* is used in different contexts, these examples have shown that *vaccination* carries a negative label when it has been decided to be made compulsory/mandatory.

Next, the contextual use of *expected* as the second word in the collocation list that carries a negative labelling of vaccination(s) is presented as follows:

20. What are the types of *vaccinations*, dosages, and potential **expected** side effects? Why is the purpose of vaccination to protect the front liners or those who are vulnerable for now and build herd immunity later, and how are the logistics details? How the public can access the vaccination, he said.
    (January 6, 2021. Use time until Covid-19 vaccines arrive to educate and inform the public. medical experts urge govt. *Malay Mail*)

21. This means that there will be 1,755 expected deaths per week for Malaysians aged 65 years and older without Covid-19 *vaccination*. These are the **expected** 'baseline' deaths every week.
(February 23, 2021. Expected death post-COVID-19 vaccination, pre-empting and the anti-vaccine propaganda. *The Borneo Post*)

The two examples illustrate how *vaccination* was portrayed negatively in the newspapers. *Vaccination* was described as having potential expected side effects, and the projection of expected deaths among the elderly without COVID-19 vaccinations was also mentioned in one of the news reports. While there are words that were found to collocate with *vaccinations* and carry a negative labelling, they are limited as compared to the positive labelling. It is also worth noting that the negative labelling of *vaccination*, as evidenced in the findings, are negative labels related to the *vaccination* itself and its implementation process. Considering that the corpus used in the present study only includes COVID-19 vaccination news reports in Malaysia, there were no instances of polarisation to the COVID-19 virus or to a certain country or nationality.

Further, it is important to note that the negative labels were presented in the form of reported speeches by two distinct medical practitioners, one representing the general public while the other representing the government, which holds the authority. Despite communicating the same negativity, these reported speeches conveyed conflicting ideologies in relation to the mandatory policy of vaccination. The generality in the description of *Dr Khoo*, as the medical practitioner without an affiliation with any specific organisation, represented those who opposed the mandatory policy, while the other, Dr Adham Baba, specifically mentioned as the *Minister of Health*, supported the mandatory policy as the vaccination programme was prefaced by the lack of public compliance.

The discursive strategies employed by the mainstream media in the reporting of COVID-19 vaccination in Malaysia revealed that the collocations of the word *vaccination* can be divided into two main labels, namely positive and negative. Consequently, the mainstream media was seen to view *vaccination* in a positive light, indicating support for the government in the planning and implementation of the National Immunisation Programme (NIP) in Malaysia. These findings concur with George's (2007) and Rajaratnam's (2009) perspectives that the mainstream media tend to release positive stories that are in support of the government's ideology to achieve the highest immunisation rate among its citizens and non-citizens residing in Malaysia.

CONCLUSION

This study analyses the news discourse of COVID-19 vaccination-related articles in the Malaysian mainstream media using corpus-assisted analysis and CDA. Based on Wodak's (2001) DHA of referential / nomination and predication strategies, the collocation and wordlist identify the specific social groups and social actors affiliated with the government and its stakeholders as the collocates of *vaccination*. Another type of collocates is the words referring to phenomena, objects, actions, processes and events in the nonhuman category that describe the process of getting vaccinated. Besides the synonyms, vaccination was also named the National COVID-19 Immunisation Programme, which further depicted it as a national agenda. The neutral terms used did not only mean that the mainstream media solely reported factual information about vaccination, but it also played the role of being the mouthpiece of the government in relaying the message that the authorities intended to convey to the public. Furthermore, analysis of the predication strategy reveals that vaccination was mostly labelled positively in the reports as a way to promote the national programme.

The study not only contributes to the vast literature on COVID-19 by providing a linguistic analysis of discursive practice, but it also presents the synergy between the corpus techniques and CDA in uncovering the patterns of word associations to unveil the ideologies of the mainstream media discourse, especially in the Malaysian context. The discursive strategy analyses done on vaccination as it appeared in the Malaysian mainstream media help to inform how certain words that can influence audiences' perceptions and decisions are used in news reports, indicating a discourse producer's ideology. The linguistic analysis can further benefit language users in their production and consumption of the discourse through the incorporation of discursive strategies that can further contribute to the construction of views involving media discourse. Thus, similar analyses could also be conducted on other potential words for the same purpose.

ACKNOWLEDGEMENTS

REFERENCES

Abbas, A. H. (2021). Politicizing COVID-19 vaccines in the press: A Critical Discourse Analysis. *International Journal for Semiotics of Law,35*, 1167–1185. https://doi.org/10.1007/s11196-021-09857-3

Adel, L. (2020). A Tale of Two Revolutions: A Discourse Historical Analysis (DHA) of selected political speeches during the Arab Spring of the Egyptian and Lebanese Revolutions. *Textual Turnings: An International Peer-Reviewed Journal in English Studies*, *2*(1), 117-134.

AlAfnan, M. A. (2020). COVID 19-The foreign virus: Media bias, ideology and dominance in Chinese and American newspaper articles. *International Journal of Applied Linguistics and English Literature*, *9*(1), 56-60.

Al Mamoori, S. M., & Kareem, H. H. (2022). A Critical Discourse Analysis of vaccination skepticism in American newspapers. *Humanitarian & Natural Sciences Journal, 3*(1), 416-430. https://doi.org/10.53796/hnsj3125

Alyeksyeyeva, I., Kaptiurova, O., & Orlova, V. (2021). World War Flu: War Rhetoric of the Australian Prime Minister on Coronavirus. *3L: Language, Linguistics, Literature*, *27*(1), 90–101. http://doi.org/10.17576/3L-2021-2701-07

Brezina, V., Weill-Tessier, P., & McEnery, A. (2021). #LancsBox v. 6.x. [software package]

Broudy, D., & Hoop, D. (2021). Messianic mad men, medicine, and the media war on empirical reality: Discourse analysis of mainstream COVID-19 propaganda. *International Journal of Vaccine Theory, Practice, and Research*, *2*(1), 1-24.

Chai, J. (2023). Perception of Covid-19 vaccine in Malaysia: A social media qualitative research. *Research in Social & Administrative Pharmacy: RSAP*, *19*(7), 23-23.

Erdogan-Ozturk, Y., & Isik-Guler, H. (2020). Discourses of exclusion on Twitter in the Turkish Context:# ülkemdesuriyeliistemiyorum (# idontwantsyriansinmycountry). *Discourse, Context & Media*, *36*, 100400. https://doi.org/10.1016/j.dcm.2020.100400

Gablasova, D., Brezina, V., & McEnery, T. (2017). Collocations in corpus-based language learning research: Identifying, comparing, and interpreting the evidence. *Language Learning*, *67*, 155-179. https://doi.org/10.1111/lang.12225

George, C. (2007). Media in Malaysia: Zone of contention. *Democratisation*, *14*(5), 893-910.

Hunston, S. (2002). *Corpora in Applied Linguistics*. Cambridge: Cambridge University Press.

Ivić, S., & Petrović, R. (2020). The rhetoric of othering in a time of pandemic: Labeling Covid-19 as a "foreign virus" in public discourse. *Kultura Polisa*, *43*, 421-433.

Jinshuang, L., & Rong, L. (2021). On the discourse construction of China's image in fighting COVID-19 from a corpus-based Discourse Historical Approach perspective. *IETI Transactions on Social Sciences and Humanities*, *12*, 81-89.

Keong, W. K. (2017). Whither objective journalism in digital age: Malaysia's mainstream versus alternative media. *Media Watch*, *8*(1), 30-43.

Laongpol, J. (2021). A contrastive study on rhetoric in COVID-19-related news headlines from native and non-Native English online newspapers. *3L: The Southeast Asian Journal of English Language Studies*, *27*(1), 47 – 61. http://doi.org/10.17576/3L-2021-2701-04

Lau, J. F. W., Woon, Y. L., Leong, C. T., & Teh, H. S. (2021). Factors influencing acceptance of the COVID-19 vaccine in Malaysia: A web-based survey. *Osong public health and research perspectives*, *12*(6), 361-373. DOI: 10.24171/j.phrp.2021.0085

Malik, N. A., Shak, M. S. Y., & Hasni, N. A. (2023). Examining the framing of 'COVID-19 vaccines': A corpus-based investigation of Malaysian newspapers. *Studies in English Language and Education*, *10*(2), 1022-1040.

Marzo, R. R., Ahmad, A., Abid, K., Khatiwada, A. P., Ahmed, A., Kyaw, T. M., & Shrestha, S. (2022). Factors influencing the acceptability of COVID-19 vaccination: A cross-sectional study from Malaysia. *Vacunas*, *23*, S33-S40.

Mohamed, N. A., Solehan, H. M., Mohd Rani, M. D., Ithnin, M., & Arujanan, M. (2023). Understanding COVID-19 vaccine hesitancy in Malaysia: Public perception, knowledge, and acceptance. *Plos one*, *18*(4), e0284973. https://doi.org/10.1371/journal.pone.0284973

Mohamed, N. A., Solehan, H. M., Mohd Rani, M. D., Ithnin, M., & Che Isahak, C. I. (2021). Knowledge, acceptance and perception on COVID-19 vaccine among Malaysians: A web-based survey. *PloS one, 16*(8), e0256110. https://doi.org/10.1371/journal.pone.0256110

Nyanoti, J. N. (2022). Analysing the mythologies and the ideological nuances in photographic representation of COVID-19 containment in Kenya's newspapers. *Journal of African Media Studies*, *14*(1), 109-123. https://doi.org/10.1386/jams_00068_1

Rajaratnam, U. D. (2009). Role of traditional and online media in the 12th general election, Malaysia. *The Journal of the South East Asia Research Centre for Communications and Humanities*, *1*(1), 33-58.

Stepanov, I., & Komendantova, N. (2022). Analysing Russian media policy on promoting vaccination and other COVID-19 risk mitigation measures. *Frontiers in Public Health*, *10*, 1-12. https://doi.org/10.3389/fpubh.2022.839386

Sun, W. (2021). The virus of fear and anxiety: China, COVID-19, and the Australian media. *Global Media and China*, *6*(1), 24-39. https://doi.org/10.1177/2059436421988977

Syed Alwi, S. A. R., Rafidah, E., Zurraini, A., Juslina, O., Brohi, I. B., & Lukas, S. (2021). A survey on COVID-19 vaccine acceptance and concern among Malaysians. *BMC Public Health*, *21*(1), 1-12. https://doi.org/10.1186/s12889-021-11071-6

Vaithilingam, S., Hwang, L. A., Nair, M., Ng, J. W. J., Ahmed, P., & Musa, K. I. (2023). COVID-19 vaccine hesitancy and its drivers: An empirical study of the vaccine hesitant group in Malaysia. *Plos one*, *18*(3), e02825. https://doi.org/10.1371/journal.pone.0282520

Wang, Y. (2021). A Critical Discourse Analysis of news reports on Covid-19 in *People's Daily* and *The New York Times* (Analisis Wacana Kritis Laporan Berita tentang Covid-19 di *People's Daily* dan *The New York Times*). *Jurnal IPTEKKOM (Jurnal Ilmu Pengetahuan & Teknologi Informasi)*, *23*(1), 49-62. http://dx.doi.org/10.33164/iptekkom.23.1.2021.49 – 62

Wodak, R. (2001). The Discourse-Historical Approach. In R. Wodak & M. Meyer (Eds.). *Methods of Critical Discourse Analysis*. (pp. 63-94). London: Sage Publications Ltd.

Wong, L. P., Alias, H., Wong, Y. L., Megat Hashim, M. M. A. A., Lin, Y., & Hu, Z. (2023). COVID-19 anti-vaccine sentiments in Malaysia: Narratives of comments from Facebook post. *Vaccines*, *11*(4), 834.

Xia, G., Chen, Y., & Lu, L. (2022). A corpus-based study of public attitudes towards coronavirus vaccines. *Complexity*, *2022*, 1-10. https://doi.org/10.1155/2022/4069896

Xiao, R., & McEnery, T. (2006). Collocation, semantic prosody, and near synonymy: A cross-linguistic perspective. *Applied Linguistics*. *27*(1), 103-129. https://doi.org/10.1093/applin/ami045

Yang, Y., & Chen, X. (2021). Globalism or Nationalism? The paradox of Chinese official discourse in the context of the Covid-19 outbreak. *Journal of Chinese Political Science*, *26*, 89–113. https://doi.org/10.1007/s11366-020-09697-1

Yeh, A. (2021). A Corpus-assisted Discourse Analysis of Taiwanese students' sentiments toward Asianphobia on the news amid COVID-19. *Australian Journal of Applied Linguistics*, *4*(2), 37-59. https://doi.org/10.29140/ajal.v4n2.492

Yu, H., Lu, H., & Hu, J. (2021). A Corpus-based Critical Discourse Analysis of news reports on the Covid-19 pandemic in China and the UK. *International Journal of English Linguistics*, *11*(2), 36-45. https://doi.org/10.5539/ijel.v11n2p36

APPENDIX

TABLE 6. Wordlist of 200 most frequent words in the Malaysian Corpus of Vaccination (M-CorVax)

No	Type	Freq	Dis	No	Type	Freq	Dis	No	Type	Freq	Dis	No	Type	Freq	Dis
1	vaccine	8402	0.95	51	march	781	2.34	101	told	541	2.05	151	announced	435	2.63
2	covid-19	7944	0.64	52	malaysians	770	2.51	102	healthcare	539	3.07	152	senior	435	3.41
3	malaysia	4086	0.96	53	expected	761	2.04	103	continue	532	2.38	153	months	434	2.89
4	vaccination	3921	1.29	54	global	756	2.19	104	individuals	529	3.83	154	sarawak	433	4.50
5	vaccines	3505	1.44	55	virus	751	2.41	105	travel	528	4.69	155	business	432	3.74
6	health	3364	1.15	56	three	743	2.08	106	month	525	2.39	156	order	432	2.50
7	government	2748	1.37	57	use	743	2.71	107	recovery	525	3.02	157	foreign	431	3.88
8	people	2647	1.33	58	astrazeneca	737	3.80	108	years	524	2.61	158	based	429	2.64
9	per cent	2259	1.98	59	ensure	737	2.02	109	hospitals	522	4.17	159	media	426	3.31
10	programme	2210	1.64	60	workers	727	3.02	110	registered	522	3.42	160	news	426	3.10
11	million	2138	1.98	61	feb	719	3.05	111	committee	515	2.59	161	week	424	2.91
12	minister	2107	1.36	62	april	707	2.76	112	companies	512	3.20	162	side	423	4.16
13	national	1848	1.33	63	technology	700	1.99	113	risk	510	2.77	163	moh	422	3.86
14	immunisation	1639	1.79	64	take	686	1.99	114	effects	510	3.71	164	hospital	421	4.46
15	year	1608	1.59	65	prime	686	2.24	115	innovation	504	2.19	165	disease	421	2.86
16	pandemic	1466	1.64	66	group	678	2.57	116	make	503	2.46	166	special	418	3.03
17	doses	1432	2.33	67	economy	670	2.86	117	president	502	2.79	167	part	416	2.56
18	country	1432	1.49	68	data	654	2.92	118	yesterday	501	2.74	168	measures	416	3.04
19	public	1424	1.84	69	muhyiddin	653	2.98	119	immunity	501	3.32	169	especially	412	2.46
20	phase	1404	2.16	70	received	647	2.58	120	high	501	2.33	170	start	410	2.71
21	new	1377	1.94	71	research	642	3.36	121	community	500	4.02	171	trials	409	3.75
22	two	1252	1.79	72	due	638	2.27	122	market	498	3.41	172	singapore	409	4.56
23	ministry	1251	1.83	73	science	638	2.11	123	says	492	2.72	173	provide	407	2.62
24	khairy	1241	2.48	74	pfizer	632	3.19	124	pharmaceutical	490	2.57	174	possible	407	2.90
25	kuala lumpur	1225	1.44	75	end	631	2.21	125	where	490	2.47	175	efforts	407	2.82
26	today	1193	1.66	76	between	629	2.17	126	safe	488	2.65	176	positive	407	3.19
27	countries	1165	2.04	77	groups	615	2.48	127	day	482	2.70	177	important	405	2.69
28	vaccinated	1148	2.27	78	states	612	2.53	128	reported	479	2.53	178	spread	404	2.67
29	cases	1129	2.62	79	control	612	2.35	129	jamaluddin	476	2.18	179	company	403	3.55
30	datuk	1059	1.67	80	help	610	2.31	130	days	476	2.74	180	mco	400	4.62
31	world	1040	2.21	81	dose	609	3.22	131	adham	474	3.53	181	movement	399	2.65
32	population	970	2.18	82	according	600	2.17	132	sinovac	470	3.91	182	see	398	2.82
33	need	961	1.94	83	development	600	2.69	133	third	467	2.48	183	hisham	395	3.81
34	second	936	2.11	84	centre	597	3.17	134	far	467	2.49	184	effective	393	2.69

#	word			#	word			#	word			#	word		
35	supply	891	2.38	85	here	593	2.13	135	rate	465	3.27	185	back	392	2.81
36	time	888	1.97	86	total	593	2.56	136	used	463	2.89	186	same	391	2.66
37	state	886	3.05	87	frontliners	583	2.63	137	another	461	2.46	187	industry	389	3.80
38	now	877	1.80	88	pfizer-biontech	577	2.73	138	available	460	2.75	188	free	387	3.39
39	receive	874	2.20	89	process	577	2.57	139	good	458	2.68	189	want	387	3.09
40	economic	861	2.68	90	international	572	2.49	140	set	457	2.41	190	infection	385	3.17
41	number	856	2.29	91	plan	572	2.98	141	early	455	2.77	191	hope	384	3.11
42	medical	854	2.24	92	registration	562	3.65	142	citizens	452	3.40	192	around	383	2.65
43	including	848	1.80	93	access	561	2.55	143	statement	451	2.61	193	once	382	2.75
44	private	846	3.66	94	clinical	551	3.41	144	social	449	2.94	194	infections	382	3.20
45	them	844	2.02	95	made	547	2.38	145	sector	447	3.05	195	go	380	2.84
46	malaysian	836	2.12	96	mysejahtera	547	3.87	146	register	446	3.69	196	quarter	380	3.41
47	against	830	2.13	97	coronavirus	546	2.89	147	work	444	2.73	197	malay	378	2.28
48	given	806	2.00	98	united	546	2.57	148	support	444	2.76	198	several	378	2.73
49	during	795	1.96	99	february	544	2.75	149	information	443	3.13	199	five	375	3.01
50	billion	789	3.81	100	centres	542	3.13	150	safety	439	2.62	200	local	374	3.03