Corpus-Driven Analysis on Covid-19 Discourse in *China Daily*

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Abstract

The Covid-19 pandemic triggered a global crisis. It has had an impact on people's health, disrupted the economy, and posed a threat to social cohesion and global order. Previous research on Covid-19 discourse constructions revealed the hidden powers of media discourses in shaping public perception. While the majority of information disseminated elsewhere via the media tends to be fearful and negative, there remains a research gap regarding the potential contribution of dominant newspapers in promoting positive discourse during the crisis. Therefore, this study examines the discursive construction of Covid-19 in *China Daily*, with the aim of exploring how dominant newspapers portrayed the pandemic and its implications, particularly in terms of crisis management and the global order. Using corpus-driven critical discourse analysis, 312 news pieces from *China Daily* in 2020 were collected, forming a 10,536,625-word corpus. Collocations of "Covid-19" were collected via Antconc and semantically categorized. The three semantic groups of collocates are (1) responses, such as 'fight' and "solidarity"; (2) influences, such as "infection" and "recovery"; and (3) positioning, such as "asymptomatic" and "confirmed". Discursive constructions were found to be recontextualized, revealing the positive likelihood in senses. The results indicated that the news agency focused on solidarity, dedicated actions, vaccination, and low death toll implying positivity in the public. Covid-19 discourse in dominant newspapers, which is frequently interpreted as ideological with the aim of sustaining power relations, could convey a positive message during this pandemic of monumental global importance, shaping healthier positive attitudes, and promoting more effective international cooperation.

Keywords: Covid-19, *China Daily*, corpus-driven, positive discourse, recontextualization

1. Introduction

The Covid-19 pandemic, caused by the novel coronavirus, has had a profound

impact on global health and economy since its outbreak in Wuhan, China, in December 2019 (WHO, 2020). As at August 12, 2022, there have been 585,950,085 confirmed cases of Covid-19, including 6,425,422 deaths (Mathieu et al., 2022). The World Health Organization (WHO) declared it a global pandemic on 11 March 2020 (WHO, 2020), but despite the official name "Covid-19", stigmatization such as "Wuhan virus" or "China virus" has persisted and even led to "Asian hate crimes" (Tessler et al., 2020). This crisis has also fueled nationalist sentiments, jeopardizing global order and governance. Different measures were taken to control the pandemic, such as travel restrictions, quarantines, and mask-wearing. Long-lasting pandemics usually elicits a considerable amount of uncertainty thus resulting in anxiety and cognitive closure, which facilitate the spread of conspiracy theories, mistruths, and fake news (Schwab & Malleret, 2020). It has also triggered a rise in nationalist sentiments which endangered the interdependent global order and effective global governance.

Covid-19, a health crisis as well as discursive phenomenon, has been the negative focus of media worldwide since its outbreak, thus constituting various discourses of Covid-19. Research shows that discourses can shape people's opinion of a particular issue (Callaghan & Schenell, 2001), thus Covid-19 discourses play a pivotal role in shaping the public's understanding of the pandemic. Studies related to Covid-19 discourse approach it from various aspects: discourse of authority (Jarvis, 2022; Tay, 2022), crisis management (Luzón, 2022; Muelas-Gil, 2022), war metaphor against Covid-19 (Neagu, 2022; Yu, 2022), judgement and rivalry (Wang & Catalano, 2022); and discourse on empathy and encouragement (Vogl et al., 2022). Overall, the representations of Covid-19 and their manufacturing processes tend to maintain a predominantly negative tone of voice, addressing the complex and multifaceted aspects of the pandemic.

Therefore, approaching discursive construction from a different and positive perspective, this study focuses on investigating the discourse surrounding Covid-19 in *China Daily*, the largest international newspaper published in mainland China. As a state-owned newspaper and a mouthpiece for the Communist Party of China (CCP), *China Daily* holds significant influence. By examining the discursive practices of *China Daily* and analyzing their use of more positive tones of voice, this study aims to provide insights into the situational understanding and dynamic emergence of discourse in mainland China.

Regarding the significance of the *China Daily,* it plays a crucial role in producing and disseminating news, its English-language platform allows for communication with the global community. The Covid-19 pandemic has significantly impacted China's international reputation, with leading newspapers such as the *New York Times* (NYT) and the *Washington Post* (WSP) using terms such as "deadly Chinese coronavirus" and

accusing China of fabricating the virus as a biological weapon (Ajodo-Adebanjoko, 2022; Prieto-Ramos et al., 2020). In comparison, it would be intriguing to gain an insider-local perspective by examining the information from the viewpoint of the Chinese mainland. This study aims to investigate the counter-discourse strategies employed by *China Daily* on the international stage, particularly the use of positive discourse.

The objective of this study is to analyze the representations and discursive constructions of Covid-19 in *China Daily* using corpus-driven critical discourse analysis (CDA). The following sections present a review of the relevant literature and theoretical framework on CDA and corpus linguistics (Part 2). The results have been analyzed based on the semantic meaning of collocates, specifically examining responses, influences, and positioning (Part 3). The findings are discussed in relation to existing literature, followed by an exploration of the study's implications and concluding remarks.

2. Literature Review and Theoretical Framework

2.1 COVID-19 Discourse Studies

The Covid-19 pandemic has led to numerous studies examining various aspects of this phenomenon. International studies have analyzed the official nature of Covid-19, including the WHO website (Salama, 2022) and language used in press conferences to assess authenticity (Tay, 2022). Jarvis (2022) investigated mathematical language in UK governmental discourse on Covid-19. Previous studies on definitions and framings of Covid-19 set the agenda for this study.

Luzón (2022) identified the functions of the "Coronavirus explainer" in engaging people in combating the pandemic. Critical metaphor analysis (CMA) was employed as an analytical approach to study the conceptual frames of Covid-19 in Turkish online public discourse (Baş & Efeoğlu-Özcan, 2022) and in *China Daily*'s coverage (Yu, 2022). CMA involves analyzing the use of metaphors in discourse to uncover underlying power dynamics, ideologies, and the social construction of meaning. Notably, war metaphors have been frequently used to report on the pandemic (Pan & Chen, 2022; Neagu, 2022; Semino, 2021). Studies have examined readers' responses to Covid-19 reports in British and Spanish newspapers (Musoff, 2022; Vilar-Lluch, 2022). However, there is a need to analyze an extended period of Covid-19 coverage in Chinese newspapers, specifically *China Daily*, which can provide valuable insights due to its unique socio-economic and political settings.

Conflicts and rivalries caused by Covid-19 have been studied at intranational and international levels. Ho and Chiang (2022) studied verbal attacks on individuals who

escaped lockdown in Wuhan. Studies have explored Islamophobic language blaming Muslims for spreading Covid-19 in India (Khan, 2022), conspiracy theories scapegoating China (Parvin et al., 2021), and xenophobic discourse such as the term "Chinese virus" used by Donald Trump. The prevalence of blaming and responsibility-shirking discourses during the pandemic has led to a warning from the WHO about the infodemic related to Covid-19 (Parvin et al., 2021).

Negative aspects of Covid-19 discourse have been widely studied, while limited research focuses on positive discourse in mainstream media. Some studies have examined individual actors' discourse of encouragement and empathy, such as doctors' empathetic discourse in online diagnosis (Kondo, 2022) and fitness professionals' health-promotion discourse (Vogl et al., 2022). However, positive aspects of Covid-19 discourses remain understudied.

Although numerous studies on Covid-19 discourse have been conducted globally, little attention has been given to how Covid-19 discourse is constructed by *China Daily*. While comparisons of 3-month news coverage in *China Daily* and other newspapers have revealed differences in language use (Osisanwo, 2022; Yu et al., 2021), and studies have examined key concepts in China's foreign policy as reflected in Covid-19 discourse in *China Daily* (Yu, 2022), these studies utilize different approaches such as CMA. Therefore, there is a need to further investigate the discursive practices and representations of Covid-19 in *China Daily* from a different perspective.

This study aims to bridge this gap by examining the representations and discursive constructions of Covid-19 in *China Daily* using corpus-driven CDA. The following sections will present a comprehensive review of relevant literature and theoretical frameworks on CDA and corpus linguistics, laying the foundation for the analysis and interpretation of the findings.

2.2 Critical Discourse Analysis and Positive(/Progressive) Discourse Analysis

CDA is an interdisciplinary approach that places discourse as the object of critique, analyzing the underlying power, ideology, and voice within it (Wodak & Meyer, 2015). The foundational hypothesis of discourse studies is that discourse is both socially constitutive and socially constituted (Fairclough, 2009), highlighting the dialectical relationship between text and context. Covid-19 discourse is shaped by the pandemic while simultaneously shaping the situation.

Being critical involves more than identifying features and types; it requires seeking explanations and pathways for change. While CDA primarily focuses on negative aspects such as social power abuse, dominance, and inequality enacted through text and talk in social and political contexts (Van Dijk, 2001), it may not capture the

entirety of reality. Therefore, Martin (1999) proposed a complementary approach called positive discourse analysis (PDA), which emphasizes hope and change. PDA combines design and critique to analyze discursive practices and social phenomena, aiming to uncover discursive mechanisms that reinforce social injustice and promote progressive social change.

Luke (2002) argues that CDA should not only identify problematic aspects of discourse but also demonstrate what "should be" in the world. This challenges the assumption that all media are centrally controlled forms of ideological influence, where the general populace is passively subjected to such control. Luke advocates for the analysis of positive discourses, encouraging researchers to explore "positive and productive configurations of power/knowledge in discourse."

Building on this perspective, Macgilchrist (2007) developed the PDA framework by examining media discourse characterized by dominance. The researcher explores how reframing issues within alternative knowledge systems can yield new interpretations and challenge mainstream viewpoints. This aligns with the study's focus on examining positive discourse in dominant newspapers regarding Covid-19, aiming to identify instances where alternative frames or narratives deviate from the prevailing narrative of fear, stigmatization, and finger-pointing.

In contrast to CDA's emphasis on marginal group, PDA can be applied to study dominant discourse (Xu, 2014), a direction advocated by many CDA researchers. This approach calls for the enhancement of dominant discourse through self-presentation in a more objective manner (Koller, 2008). By analyzing how dominant newspapers frame and present positive aspects of the pandemic, such as stories of resilience, community support, scientific advancements, or successful mitigation strategies, researchers can gain insights into how these positive discourses are constructed and whether they contribute to a more nuanced understanding of the situation.

Hughes (2018) suggested that PDA and CDA are interrelated and should be seen as complementary approaches in the pursuit of progressive social change. They emphasize the importance of resistance to injustice in both approaches. To overcome the limitations and connotations associated with the terms "positive" and "negative" discourse analysis, Hughes proposes alternative terminology such as "progressive" discourse analysis. This reframing aims to encompass the broader scope of both design and critique, highlighting the goal of informing normative reflection and spurring redesign in advocacy practices.

In summary, the literature review reveals the evolution of discourse analysis, with CDA focusing on power dynamics and PDA emphasizing hope and change. Hughes proposes the interrelation of PDA and CDA, suggesting alternative terminology

such as "progressive" discourse analysis. Analyzing dominant newspapers' positive discourse on Covid-19 within a progressive framework offers insights into nuanced understanding and empowering marginalized voices.

2.3 Corpus-Driven Study

In the review of literature, recognizing pertinent research that differentiates between corpus-based and corpus-driven methods is crucial. Kheovichai's study (2022) exemplifies a corpus-based approach, utilizing the speech corpora of the WHO director-general to scrutinize the collocations associated with Covid-19. This investigation deepened understanding of the linguistic patterns and collocational tendencies within pandemic discourse. However, it is important to distinguish Kheovichai's findings from the corpus-driven methodology adopted in this present study.

The corpus-driven approach is bottom-up and exploratory, providing empirical and quantitative evidence to substantiate claims and reduce researcher subjectivity in data collection. It facilitates CDA by identifying repetitive lexical items reflecting ideology and recognizing the cumulative power of media through repeated patterns (Baker, 2006; Fairclough, 2013).

There is a range of research underscoring the effectiveness of the corpus-driven approach in dissecting media discourse linked to Covid-19. For instance, Nor and Zulcafli (2020) leveraged this approach to study news reports from *The Star* online, with a focus on the pandemic's impact on Malaysian society and the government's handling of the situation. Their analytical process revealed key themes and pinpointed the top collocates with "Covid-19", illuminating the Malaysian-specific discursive elements of the pandemic.

Zahra and Abbas (2022) also employed a notable corpus-driven examination of editorials from Pakistani newspapers during the pandemic's early phase. The objective of their research was to pinpoint socio-cultural attitudes and behavioral patterns associated with Covid-19. Their corpus-driven methodology uncovered discourse patterns emphasizing the necessity for a more positive and proactive media representation to shape public attitudes and actions effectively.

In the broader discussion of corpus-based and corpus-driven methodologies, including Kheovichai's research, serves to underscore the variety of techniques used in this discipline. This present study adopts a corpus-driven approach, investigating the discursive framing of Covid-19 in *China Daily*, which contributes to the corpus of literature on corpus-driven CDA. This review emphasizes the significance of considering diverse methodologies and their implications for understanding language and discourse within the context of a global pandemic.

3. Methodology

3.1 Data collection

This research exclusively collected all news reports for analysis from the official website of *China Daily* (https://www.chinadaily.com.cn/). The study focused on examining the discursive manifestations of Covid-19 discourse within *China Daily*'s coverage during the first wave of the pandemic, spanning from January to December 2020. Daily e-papers from *China Daily* were obtained through a subscription, ensuring comprehensive coverage of the relevant period. The final corpus consisted of 312 news reports in total and the size of the corpus was 10,536,625-word tokens.

Given that *China Daily* is owned by the CCP, all reportage is assumed to be aligned with the CCP's ideological position. This assumption is crucial for understanding the contextual framework within which the news reports are situated.

3.2 Data analysis

To investigate the representations of Covid-19 discourse in *China Daily*, a corpus-driven CDA approach was adopted, complemented by content analysis. The analysis focused on a corpus of 312 news reports published in 2020. The corpus was analyzed using AntConc version 4.0.3, a freeware corpus analysis toolkit for concordancing and text analysis (Anthony, 2022). The classification criteria for the corpus in this study were influenced by Kheovichai's (2022) categorization and analysis of the semantic groups in Covid-19 discourse from speeches by the WHO director. Kheovichai identified four main semantic groups: response, effects, identification, and others. This study adopts a similar categorization framework, aligning with Kheovichai's approach, to facilitate a comparative analysis of the representation of Covid-19 discourse in the speeches of the WHO director general. While Kheovichai (2022) does mention the use of CDA, it does not employ CDA as the primary method of analysis. Similarly, in this study, CDA/PDA is adopted as an analytical framework to complement the collocation analysis, rather than being used as the main method of analysis. The primary focus of this study is on the collocation analysis to examine the semantic groups and representations of Covid-19 discourse. However, the inclusion of CDA/PDA allows for a comprehensive understanding of the discourse by considering the broader discursive aspects and potential socio-political implications. This combination of analytical approaches is intended to enhance the depth and richness of the analysis.

The search term for the analysis was determined by examining the frequencies of possible search terms (see Table 1). Although more than one search term could refer to Covid-19, reasons for not using them are as follows: first, low frequency as shown

in "disease"; second, co-occurrence with "Covid-19" (see Excerpt 1); and third, the ambiguity in meaning (see Excerpt 2). The corpus searches indicate that "Covid-19" has the highest frequency and no ambiguity in meaning. In comparison, words such as "pandemic", "virus", "disease", and "outbreak" can also refer to other diseases as shown in Excerpt 2.

Table 1
Frequency of Possible Search Terms

Search Term	Frequency	Range
Covid-19	11,149	238
pandemic	9,885	243
coronavirus	8,664	259
outbreak	7,325	262
virus	9,407	264
disease	2,903	262

Excerpt 1
Existing financial challenges have been accelerated by the impact of the <u>Covid-19 pandemic</u> on rugby activities, USA Rugby said.

Based on the co-occurrence of "Covid-19" and "pandemic" in Excerpt 1, the search term "Covid-19" with a higher frequency was chosen to avoid repetition.

Excerpt 2
On Sunday, virologist Chen Huan-chun made a public apology for mistakenly saying the novel coronavirus is a type of SARS <u>virus</u>, which caused panic on Chinese social media as the public thought that the novel virus and the SARS <u>virus</u> were the same.

Excerpt 2 shows the term "virus" is not exclusive to "Covid-19" but refers to SARS, another disease, thus this possible search term is excluded due to its ambiguity in meaning.

Collocates within a three-word span to the left and right of the target word were collected based on likelihood threshold, requiring a minimum of five occurrences in the corpus. AntConc's "sort by likelihood" feature was utilized to arrange concordance lines based on the likelihood of word occurrence in the corpus. This likelihood was determined using the Mutual Information (MI) score, which compares the frequency of

two words occurring together to their individual frequencies. A higher MI score indicates a stronger relationship between the words. By sorting the concordance lines according to likelihood, AntConc prioritized the lines with the highest MI score at the top.

To ensure semantic relevance, only content words such as nouns, verbs, and adjectives were analyzed. Initially, two researchers independently selected 100 content words based on their MI scores. However, discrepancies arose due to differences in considering different grammatical forms of the same word. To enhance interrater reliability, the researchers agreed that different grammatical forms of a single lemma would be counted as separate content words. This adjustment aimed to increase agreement and improve reliability.

The resulting 100 collocates were manually coded by the researchers. The analysis revealed three common semantic categories. Concordances of these collocates were examined to provide contextual information and understand the representation of Covid-19.

By incorporating Kheovichai's categorization and utilizing a combination of collocation analysis, CDA and PDA, and content analysis techniques such as examining tone, metaphor usage, and lexical choices, we conducted a comprehensive examination of the semantic groups and representations present in the Covid-19 discourse within *China Daily*.

4. Results

This section presents the collocation analysis and the representation of Covid-19. The data analysis reveals how Covid-19 is discursively constructed with crisis-management mindset to guide public's focus on the dedicated and sustained action of government and notion of solidarity.

The top 100 content words were selected based on their likelihood, determined using the MI score. Through this analysis, common themes and associations emerged, allowing for the grouping of collocations to be divided into three semantic categories: (1) responses, (2) influences, and (3) positioning. This grouping was based on the shared characteristics and relationships among the collocates within each category. Table 2 presents word examples for each category, including token frequencies and collocate token ratios in the corpus. Selected collocate excerpts will be analyzed to explore how these lemmas contribute to the discursive construction of Covid-19.

Table 2
Semantic Groups of Collocates

Index groups of collocates	Example words	Frequency (tokens)	Ratio (‰)
Responses	fight, vaccine, response, test, battle, prevention, treat, tackling, dealing, solidarity, tracking	114,204	10.84
Influences	spread, pandemic, crisis, contracted, impact, recover, severe, shock, effect	84,810	8.05
Positioning	positive, case, reported, symptoms, asymptomatic, infection, died, onset, confirmed, number, percent, hit	239,598	22.74

4.1 Reponses

The analysis of collocates related to responses to tackling Covid-19 reveals several linguistic aspects (as shown in Table 3).

The first aspect focuses on the attitudes of the CCP or Chinese officials in dealing with the virus, using terms such as "fight", "battle", "combat", and "solidarity". These terms depict Covid-19 as an enemy requiring militarized action and collective effort, potentially legitimizing an ideological implication for the national or global fight against the pandemic.

The second aspect includes collocates related to addressing Covid-19, such as "vaccine", "prevention", and "treatment". These collocates guide the public scientifically and encourage effective measures against the virus. However, a comprehensive understanding of the pandemic requires considering multiple factors beyond individual words such as "prevention".

The third aspect involves policies to address Covid-19, such as "tracking" and "containment". These collocates indicate strategies such as contact tracing, tracking, and surveillance taken to curtail or halt the transmission of the virus.

Table 3
Sub-Categories of Responses

Sub-categories	Collocates
Attitudes in dealing with Covid-19	fight, response, battle, combat, tackle, handling, solidarity
Measures dealing with Covid-19	vaccine, prevention, tested, treatment, test

Policy to deal with Covid-19	tracking, containment

Attitudes toward Covid-19 can be conveyed through militaristic connotations, such as "fight", "battle", and "combat", treating the virus as an enemy. Conversely, terms such as "tackle" and "handling" present Covid-19 as a problem to be addressed. However, terms such as "solidarity" suggest a cooperative approach, emphasizing unity and collective effort. While militaristic terms may seem aggressive, in this context, they encourage public action and unity, aligning with positive sentiments from previous studies on war discourses (Pan & Chen, 2022).

Collocations related to measures such as "vaccines" and "preventions" convey a precautionary mindset and action. The public is exposed to pro-vaccination messages and actively engaged as agents in preventing the spread of the disease. Linguistic analysis can explore the persuasive language techniques, emotional appeals, and evidence-based information used in these messages to understand their impact on public perception and behavior.

Collocates associated with policies, such as "quarantine" and "lockdown", represent measures taken to control the spread of infection. Linguistically, these terms emphasize the enforcement of restrictions to limit the virus transmission. Technology has also played a vital role in identifying infected individuals, contact tracing, and containing outbreaks. This aligns with the effectiveness of widespread testing, isolation, contact tracing with technology, and quarantine emphasized by Schwab and Malleret (2020) for early intervention. Sample concordances of these response-related collocates can be found in Table 4.

Table 4
Sample Concordances of Responses Collocates

1	March 20 after being shut down for 58 days amid the ***containment*** of the	COVID-19	outbreak. The plant, located in Dongxihu district in Wuhan, was
2	China has maintained a proactive attitude in the global ***fight*** against	COVID-19,	first within its territory from the very first moment,
3	of medical supplies to better aid the global ***battle*** against the	COVID-19	outbreak, officials said on Sunday. Chinese companies had exported epidemic prevention
4	made great headway in the research and development of	COVID-19	***vaccines***, it is able to translate its commitment into reality,

Excerpt 3 (*China Daily*, 11 May 2020)
*PepsiCo Wuhan **reopened** its production line on March 20 after being shut down for 58 days amid the **<u>containment</u>** of the COVID-19 outbreak.*

In terms of specific examples, Excerpt 3 provides insights into China's adoption of a containment policy during the initial outbreak of Covid-19 in Wuhan. The choice of words such as "containment" and "reopen" holds significance, highlighting the measures taken and their effectiveness. The economic loss of the lockdown and the government's burden reflect the sociocultural impact. This excerpt contributes to a comprehensive understanding of the containment policy, its impact on economic and societal aspects, and the sociocultural challenges faced by the government in managing the COVID-19 outbreak.

Excerpt 4 (*China Daily,* 10 October 2020)
*As China has made great **headway** in the research and development of COVID-19 **<u>vaccines</u>**, it is able to translate its commitment into reality, Su added.*

Excerpt 4 highlights the significant progress made by China in the research and development of COVID-19 vaccines, signaling the fulfillment of their commitment. Use of the word "headway" in the excerpt indicates that *China Daily* employs a journey metaphor to depict this progress. Journey metaphors are commonly associated with positive representations, symbolizing advancement and accomplishment (Charteris-Black, 2004). In this context, the journey metaphor reflects a positive attitude toward vaccine research and development efforts. Additionally, the reference to *China Daily*'s role in promoting and disseminating reliable information about vaccines aligns with Vai et al.'s (2020) study, emphasizing the pivotal role of the media in enhancing public awareness of COVID-19 risks and encouraging protective behaviors.

4.2. Influences

This category of collocates was used to examine the various influences of Covid-19. The subcategories and corresponding collocates are presented in Table 5. The collocates were further categorized into two groups: one focused on the degree or scope of the influences, while the other focused on the effects or outcomes. The group representing scope and degree included words such as "global", "severe", or "onslaught". The group representing effects and outcomes consisted of verbs indicating the negative impact of Covid-19 such as "cause", "affect", and "spread", as well as verbs indicating positive results, such as "recover". Concordance examples illustrating the collocates related to influence can be found in Table 6.

Table 5
Sub-Categories of Influences

Sub-categories	Collocates
Degree/Scope	spread, surge, raging, ravage, global. local, severe, summit, onslaught
Effects/Outcomes	recover, resurgence, cause, affect, effect, pose, impact, shock, impact, infect, death, challenge

Table 6
Sample Concordances of Influences Collocates

1	countries across the world. To mitigate the ***impact*** of the	COVID-19	pandemic and other uncertainties on the regional economy, China
2	local tourism has recovered from the negative ***effects*** of the	COVID-19	outbreak that started earlier this year.
3	economic situation in China after the ***onslaught*** of the	COVID-19	pandemic, Cong responded with two key words
4	enforcement. China's relatively quick ***recovery*** from the	COVID-19	pandemic without a major fiscal stimulus has also allowed

Excerpt 5 (*China Daily,* 27 December 2020)
*To mitigate the <u>impact</u> of the COVID-19 pandemic and other uncertainties on the regional economy, China must **seize this rare opportunity**, actively promote the implementation of the RCEP, share the development dividends of the FTA, rely on the regional market and the various connectivity facilities to **reach mutually beneficial or win-win cooperation**.*

Excerpt 5 reveals China's focus on reciprocity and mutual benefit in mitigating the impact of COVID-19 on the regional economy. The linguistic features, such as phrases such as "seize this rare opportunity" and "mutually beneficial or win-win cooperation", emphasize China's proactive approach and strategic planning. The mention of RCEP (Regional Comprehensive Economic Partnership) and FTA (Free Trade Agreement) highlights China's active involvement in regional economic integration. Overall, the linguistic choices in this excerpt convey China's commitment to fostering balanced relationships and collaborative growth.

Excerpt 6 (*China Daily*, 24 July 2020)
*Asked about the economic situation in China after the <u>**onslaught**</u> of the COVID-19: pandemic, Cong responded with two key words: **resilience** and **confidence**.*

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Excerpt 6 highlights China's economic situation following the impact of the COVID-19 pandemic. The word "onslaught" signifies the severity of the challenges faced by China. However, the statement by Cong, China's ambassador to Canada, emphasizes two key words: resilience and confidence. This reflects Cong's positive outlook on the economic situation in China.

4.3 Positioning

This category of collocates was employed to characterize Covid-19. They can be classified into three groups: symptoms, identification, and test results (as shown in Table 7). The collocates associated with symptoms include "onset" and "asymptom", among others. The identification group comprises the number, ratio, and cases. Regarding the test results, they are grouped into "positive" and "negative". Table 8 presents examples of concordances for the collocates related to positioning.

Table 7
Sub-Categories of Positioning

Sub-categories	Collocates
test/results	positive, negative, diagnosed
identification	patients, case, reported, number, percent, hit
symptoms	onset, contracted, confirmed, influenza, asymptom, symptom

Table 8
Sample Concordances of Positioning Collocates

1	performances for the first time since the ***onset*** of the	COVID-19	pandemic. Some of the country's top rock bands will
2	day with detailed data on more than 44,000 ***confirmed cases*** of	COVID-19,	which provides a better under-standing about the age
3	coronavirus after the city reported four new ***asymptomatic cases*** of	COVID-19	on Tuesday. All the results by noon Wednesday were negative,
4	Monday morning, more than 146,900 people in the US had ***died*** of	COVID-19	nearly a quarter of the global total — and

Excerpt 7 (*China Daily*, 19 February 2020)
*China published a paper on Monday with detailed data on more than **44,000** **confirmed cases** of COVID-19, which provides a better understanding about the age*

[14]

range of people affected, the severity of their diseases and the mortality rate.

Excerpt 8 (*China Daily*, 17 December 2020)
*More than **8,000** people in Dalian, Liaoning province, have been tested for novel coronavirus after the city reported four new **asymptomatic cases** of COVID-19 on Tuesday.*

In both excerpts, the use of specific language such as "detailed data" and statistics such as "44,000" and "8,000" contributes to the overall understanding of the scale, impact, and government response to the COVID-19 pandemic in China. The linguistic features employed, such as precise figures, detailed data, and emphasis on testing, enhance the clarity and scientific nature of the information provided in the news articles.

5. Discussion and Conclusion

In summary, this study investigated the positive discursive construction of Covid-19 in *China Daily*, the largest international newspaper published in mainland China. By examining the portrayal of the pandemic and its implications, particularly in terms of crisis management and global order, insights into how dominant newspapers shape public perception were sought. The findings revealed the promotion of positive discourse during the crisis, including militarized keywords in coping with Covid-19, *China Daily*'s pro-vaccination messages, successful crisis management in China, the discursive power of data and statistics, and the emphasis on positive action. These findings illuminate how dominant newspapers shape public perception, addressing risk-perception, vaccine hesitancy, confidence-building, and effective crisis response. These discussions shed light on the situational understanding and dynamic emergence of discourse in mainland China, ultimately contributing to a comprehensive understanding of the Covid-19 narrative in the media landscape locally and globally. Several results emerged from the corpus-driven analysis, which will serve as the basis for further discussion and exploration of their implications.

5.1 Militarized discourses in coping with Covid-19

Regarding to collocates associated with attitudes and actions in coping with Covid-19, militarized terms such as "fight", "battle", "combat" were used in *China Daily*. Contrary to studies which interpret them as the language of fear communication in order to legitimize an action and serve as a rationale for authority to be obeyed (Cap, 2008), *China Daily* employed these war discourses to raise people's risk-perception of Covid-19. This aligns with a diachronic study on war discourse of Covid-19, which found a statistically significant association with positive valence (Pan & Chen, 2022).

This implies a broader, possibly global shift in the interpretation and application of war discourses in the pandemic context. The consistent positive valence across different contexts indicates a strategic repurposing of war discourses to instill a collective fighting spirit and resilience in the face of the global health crisis.

However, it is important to note that this is a specific case study and may not be universally applicable. Cultural, societal, and linguistic factors may influence how these metaphors are received and interpreted in different communities. Nonetheless, this finding significantly contributes to the evolving understanding of war discourses usage in crisis communication and the emotional responses they can evoke.

5.2 China Daily*'s pro-vaccination messages*

Vaccines, recommended by WHO to control virus and protect public health, have faced negative messages in the media, often due to poor understanding of science and exaggerated possible harm (Catalán-Matamoros & Peñafiel-Saiz, 2019). Vaccine hesitancy, listed as one of the top-10 global health threats by the WHO, has been attributed to anti-vaccine discourses disseminated by the media (Azhar et al., 2018). In terms of positioning, pro-vaccination discourses are often marginalized and peripheral compared to the dominant role of anti-vaccine content (Johnson et al., 2020; Wilson & Wiysonge, 2020).

China Daily's pro-vaccinate messages not only highlight China's efforts in vaccine research but also endorse the vaccine with political authority. Although the political power behind the discourse is often viewed negatively, in this context, it plays a positive role in building public confidence in vaccinations. This is supported by Vai et al. (2020), who found that legacy media regained credibility as reliable sources of information during the pandemic.

The pro-vaccination discourse promoted by *China Daily* has increased the Chinese people's confidence in vaccines, resulting in 89.8% fully immunization rate in China (Mathieu et al., 2022). In contrast, 41% of Republicans in U.S. are anti-vaccination, despite the vaccine's proven safety (Santhanam, 2021). The vaccine produced in China has faced distrust in the U.S. and Brazil (Kreps & Kriner, 2020). Media ideologies can hinder objective analysis, and *China Daily* has been accused of constructing a Covid-19 discourse to improve China's public image. Criticisms have also been directed at the WHO director's discourse (Kheovichai, 2022) and the UK government (Jarvis, 2021), despite the positive effects of these discourses during uncertain times. To provide explanatory critique, it is crucial to assess the actions resulting from the discourse. Thus, contextualizing *China Daily*'s strategies within the Covid-19 pandemic is essential, considering the effects of these discourses since

communication is based on its impact.

5.3 Effective crisis management

China's cumulative death toll from the outbreak of Covid-19 in December 2019 to 13 August 2022, stands at 5, 226 (WHO, 2022). Considering China's population of 1.4 billion people, which accounts for over 18% of the world population, with 18.7% being senior citizens (60 and above) (chinathinktanks.org.cn), this death toll percentage can be seen as a significant success in crisis management. As highlighted by the Great Barrington Declaration, adopting measures to protect the vulnerable should be the central aim of public health responses to Covid-19. These precautionary measures should not only be adopted by medical staff but also by government. The role of the government has been tested during the pandemic and those governments that have adopted measures such as vaccinations or effective guidance on precautions have been successful in protecting their populations to the maximum extent (Micklethwait & Wooldridge, 2020).

The effectiveness of militaristic prevention measures implemented by the Chinese government can be seen in research conducted by the Imperial College London, which found that wide-scale rigorous lockdowns imposed in March 2020 averted 3.1 million deaths in 11 European countries. Similarly, studies conducted at the University of California, Berkeley, reported that confinement measures effectively curbed the exponential growth of Covid-19.

As suggested by Moffitt (2016), leaders' crisis responses can be viewed from two aspects: the political framing of the crisis and the government's actions. Unlike the Trump administration, which downplayed the crisis's effects on public health and cast doubt on medical specialists (Roberts, 2022), the Chinese government framed this crisis by prioritizing lives over the economy and implemented policies based on scientific and medical expertise. Despite Trump's advertisements claiming that Covid-19 posed a threat similar to the flu, research published in *Nature* showed that Covid-19 can cause multi-organ dysfunction and prolonged symptoms. These serious consequences are not limited to symptomatic early Covid-19 variants; patients with asymptomatic mild Covid-19 have also been found to experience virus replication in multiple organs, including the brain (Chertow et al., 2021). Many researchers have reported long Covid symptoms of chronic fatigue, headache, joint pain, chest pain, physical limitation, and mental health problem (Crook et al., 2021; Raveendran et al., 2021). In addition to preventive measures such as nucleic acid testing (NAT), immunization, mask-wearing, and social distancing, the Chinese government also covers medical expenses for confirmed Covid-19 cases, ensuring that everyone, regardless of their socioeconomic status, receives proper treatment.

5.4. The discursive power of data and statistics

The openness and timeliness of providing detailed data, including confirmed cases, have considerable discursive power to alleviate public skepticism and legitimize the authority's actions. *China Daily*'s decision to count and share detailed Covid-19 data provided the public with access to understand the severity of the pandemic and its progress. Statistics are also incorporated into discourses on vaccine development, testing capacity, death toll, and international comparison. Quantifying Covid-19 not only serves as a reminder of how to act, but also helps people understand the reasons behind following the government's guidance. The use of statistics and a scientific linguistic register in *China Daily* likely contributed to effectively controlling the spread of the virus, documenting the pandemic's progress and trends, legitimizing Chinese government policies such as lockdowns, containment measures, and contact tracking.

The representation of Covid-19 in *China Daily* focused on the importance of dedicated and sustained action, even in situations where the outcome could not be visualized or controlled. While the overall portrayal of Covid-19 may be negative, the Chinese government's handling of the virus is depicted positively. The guidance provided by *China Daily* aimed to help the public understand the challenges posed by Covid-19 and the necessity of taking proactive measures.

5.5. Limitations and implications

This study highlights the focus on China's actions and the effective conveyance of the message "positive action helps" in the representations of Covid-19 discourse found in *China Daily*. However, it is important to note the limitations of this study. The analysis was constrained by the limited capacity to delve into the extensive volume of data, such as considering parts of speech or syntactic structures to explore semantic meanings. Future research could further investigate the representation of dominant language in different time frames and contexts, allowing for a more comprehensive analysis of the discourse.

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Appendix I

	Collocate	Rank	Freq (Scaled)	FreqLR	FreqL	FreqR	Range	Likelihood
1	pandemic	1	59310	2006	22	1984	210	10135.16
2	outbreak	2	43950	888	171	717	219	3582.072
3	cases	3	37668	585	110	475	194	2065.094
4	fight	7	22914	405	375	30	178	1527.709
5	patients	10	23766	363	22	341	145	1269.006
6	impact	11	17460	288	248	40	150	1048.241
7	epidemic	13	40044	343	1	342	161	836.967
8	vaccine	14	11412	199	32	167	91	745.01
9	vaccines	15	5928	152	16	136	78	681.54
10	spread	16	19122	191	170	21	124	518.002
11	response	17	14226	165	93	72	104	492.176
12	confirmed	18	11970	154	141	13	100	488.709
13	fighting	22	7644	118	115	3	77	414.491
14	positive	24	13494	141	133	8	96	393.778
15	deaths	25	8706	117	30	87	86	380.69
16	control	27	38004	210	84	126	126	355.846
17	break	28	12126	127	19	108	98	355.191
18	caused	29	9774	116	96	20	93	350.829
19	tested	31	7110	98	86	12	71	323.453
20	infections	32	12300	118	14	104	81	311.378

	Collocate	Rank	Freq (Scaled)	FreqLR	FreqL	FreqR	Range	Likelihood
21	crisis	34	13476	113	13	100	75	271.207
22	battle	35	7482	89	84	5	70	269.512
23	affected	36	9294	91	72	19	72	243.428
24	prevention	38	16866	117	11	106	81	242.434
25	hit	39	17946	120	79	41	88	241.173
26	treat	40	6162	75	67	8	57	230.264
27	treating	41	2094	48	48	0	39	204.733
28	treatment	42	11646	85	54	31	65	183.483
29	test	43	13800	91	36	55	65	180.721
30	testing	44	10950	82	29	53	67	180.631
31	effects	45	4188	55	48	7	47	176.563
32	patient	46	6258	64	7	57	49	176.193
33	case	47	13218	83	30	53	56	158.013
34	posed	49	2772	44	37	7	35	156.819
35	reported	50	21378	104	46	58	80	154.962
36	combating	52	1332	33	33	0	28	145.71
37	recovery	53	16680	89	53	36	68	145.673
38	brought	54	10176	70	30	40	55	144.009
39	global	55	68532	194	112	82	120	139.284
40	causes	57	1740	34	24	10	33	134.583
41	resurgence	59	852	27	22	5	23	132.196
42	challenges	60	11688	71	53	18	57	131.244
43	combat	61	4014	44	41	3	39	126.65
44	symptoms	62	4326	45	20	25	40	125.256
45	transmitted	63	1116	28	24	4	25	124.317
46	shocks	74	1092	25	9	16	24	106.563
47	outbreaks	76	2070	30	6	24	25	101.797
48	recovered	79	3192	34	30	4	26	96.091
49	infected	81	9960	55	46	9	43	93.055

[24]

	Collocate	Rank	Freq (Scaled)	FreqLR	FreqL	FreqR	Range	Likelihood
50	asymptomatic	84	1920	27	15	12	20	90.098
51	contracting	85	660	19	19	0	17	89.446
52	containment	86	2100	27	11	16	24	85.607
53	shock	88	1722	25	7	18	23	84.911
54	severe	89	7356	45	31	14	41	83.695
55	died	90	6360	42	37	5	38	83.491
56	pandemic	91	144	12	0	12	12	82.103
57	impacts	94	1986	25	23	2	21	78.289
58	infection	95	7974	45	3	42	41	77.722
59	years	100	73626	18	16	2	16	67.168
60	tackling	101	1428	20	19	1	17	66.586
61	spreading	102	3462	28	9	19	24	65.403
62	risk	103	17250	62	57	5	49	64.276
63	exacerbated	104	420	13	8	5	6	63.046
64	high	118	60468	15	10	5	14	54.524
65	percent	119	101838	41	23	18	37	54.387
66	yuan	120	63084	17	9	8	15	53.074
67	disruptions	121	1158	16	10	6	16	52.864
68	imported	122	5958	32	29	3	26	52.698
69	effect	124	6426	33	12	21	30	51.974
70	handling	125	2424	21	19	2	18	51.585
71	restrictions	126	8964	39	5	34	33	51.361
72	recovering	127	1680	18	17	1	17	51.06
73	kits	128	2190	20	3	17	16	50.996
74	onset	132	576	12	11	1	12	48.969
75	ravaged	133	438	11	3	8	10	48.857
76	tackle	135	3246	23	22	1	20	48.466
77	recover	136	3918	25	21	4	23	48.249
78	surge	137	3654	24	14	10	20	47.486

[25]

	Collocate	Rank	Freq (Scaled)	FreqLR	FreqL	FreqR	Range	Likelihood
79	national	138	72192	25	15	10	24	47.004
80	battling	140	1020	14	14	0	14	46.083
81	raging	141	828	13	3	10	13	46.06
82	protocols	142	1266	15	1	14	14	45.301
83	negative	143	6900	32	27	5	29	45.274
84	number	145	38598	90	73	17	71	44.002
85	contracted	146	1332	15	15	0	13	43.907
86	locally	148	1356	15	14	1	13	43.419
87	influenza	149	750	12	5	7	9	42.944
88	earlier	150	12474	43	2	41	39	42.054
89	summit	151	3858	23	19	4	13	41.79
90	vention	153	2562	19	0	19	16	41.522
91	solidarity	154	3234	21	13	8	18	41.145
92	diagnosed	157	1308	14	12	2	14	39.686
93	onslaught	158	150	7	3	4	7	39.647
94	continues	159	4542	24	2	22	22	38.753
95	dealing	160	2790	19	16	3	19	38.753
96	market	161	72102	29	20	9	21	38.547
97	toll	162	3858	22	12	10	21	38.366
98	tracking	167	966	12	1	11	11	37.284
99	responses	168	1194	13	4	9	13	37.255
100	photographers	169	426	9	9	0	9	36.968

Freq: frequency

FreqLR: The frequency of the collocate to the left and right of the search term

FreqL: The frequency of the collocate to the left of the search term

FreqR: The frequency of the collocate to the right of the search term

Range: The number of files in which the search term appears (this is a standard term)

Likelihood: This likelihood was determined using the Mutual Information (MI) score, which compares the frequency of two words occurring together to their individual frequencies.