



Master Communication Science

UNPACKING THE PANDEMIC:

A MEDIA ANALYSIS OF DUTCH NEWSPAPERS'
COVERAGE OF THE COVID-19 PANDEMIC IN THE
HEALTHCARE AND EVENT SECTOR IN THE
NETHERLANDS

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Abstract

Objective

The media in the Netherlands have extensively covered the topic of COVID-19 since its emergence. As the main source of information for the public, the media determines what the public sees and considers important. The media shape content using news frames (conflict, economic consequences, fear, hope, human-interest, morality, politics, and responsibility), mentioning stakeholders (advisory boards, customers/clients, employees, government, management, media, sector alliances, sector/organisation, society, and specialists), and adding tone of voice (negative, neutral, or positive) concerning the frames and stakeholders. This study aims to investigate how the media have portrayed COVID-19 in the healthcare and event sectors using these news frames, stakeholders, and tone of voice and how this has changed over time. The healthcare and event sector were chosen due to their difference in core businesses (i.e., entertainment vs. healthcare).

Method

This study conducted a media content analysis of 400 newspaper articles about COVID-19 in the Netherlands related to the healthcare and event sector. These articles were published between January 2020 and February 2021 in the AD, NRC, Telegraaf, or Volkskrant. A coding book consisting of news frames, tone of voice regarding the frames and stakeholders, was used to encode the articles. The data was analysed with a qualitative research method, namely a media content analysis.

Results

The study found that responsibility, conflict, and hope frames were the most common news frames in the healthcare sector, while human-interest, economic consequences, and responsibility frames were the most common news frames in the event sector. The overall tone of voice towards the news frames was negative in both sectors. The most prominent stakeholders in the healthcare sector were external (specialists and advisory boards and customers/clients), and in the event sector internal (employees and sector/organisation), and customers/clients. The majority of stakeholders were presented in a neutral tone of voice. The healthcare sector showed peaks in the usage of news frames in line with COVID-19 mortality rates, while the event sector showed several peaks in the usage of frames when mortality rates were low.

Conclusion

This study sheds light on how newspapers have covered the COVID-19 pandemic in the Netherlands. The media, especially newspapers, play a crucial role in informing the public and have a high level of reliability as a news source. However, they should also pay attention to other effects of the crisis such as psychosocial factors, besides mortality rates, economic consequences, and physical complaints caused by COVID-19. The media should continue to be a key player in informing the public and include the bigger picture in their coverage. It is also important for the public and policymakers to pay attention to these other factors during a crisis, and therefore act as real agenda setters.

Keywords: Media coverage, news frames, stakeholders, tone of voice, coronavirus, healthcare, event.

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Introduction

December 31, 2019, seemed like a normal New Year's Eve, but it turned the entire world upside down and will not soon be forgotten. On that day, the World Health Organisation (WHO) was informed about an unknown virus, nowadays known as the coronavirus disease 2019 (COVID-19) (Cucinotta & Vanelli, 2020). This virus can cause severe pneumonia and may have long-term recovery and can be deadly for some people. It spread rapidly and was first detected in the Netherlands on February 27, 2020 (Van Marrewijk, 2020). Within months of discovering COVID-19, a global pandemic was announced by the WHO in March 2020, partly due to the deadly effects of the virus (Cucinotta & Vanelli, 2020). What followed was a hectic period of many uncertainties, fears, and drastic measures, including the creation of a 1.5 meter society and several lockdowns (Trouw, 2020; NOS, 2020a). After a three-year period, the last corona measures were abolished on March 10, 2023 (RIVM, 2023).

The healthcare sector was one of the sectors that was highly affected by the coronavirus in the Netherlands. In general, the healthcare sector aims to provide needed care, ensure quality care, offer affordable care, and prevent diseases (RIVM, 2016). The healthcare sector was one of the most important sectors during the COVID-19 crisis (WHO, 2020) since many people needed direct care. This put a lot of pressure on the capacity and services of the healthcare sector (WHO, 2020). Caregivers were busy with the high number of people who were infected by the virus, which led to overtired personnel and scheduling problems (Goudsmit, 2020). Approximately 1.4 million people were working in the healthcare sector during the pandemic, and it is expected that there will be growth in employment opportunities (NOS, 2020b; UWV, 2020).

The event sector was another sector that was highly affected by COVID-19. The events sector aims to entertain, bring people together, exchange information, or promote the experience of arts & culture (Alles over Marktonderzoek, n.d.). The event sector was affected in a different way by the coronavirus pandemic, as it was prohibited and impossible to organise events due to coronavirus measures such as lockdowns (Klaassen & Van Mersbergen, 2021). This resulted in the sector suffering an estimated financial loss of 11 billion euros, and recovery would take years (Event Branche, 2020). In 2020, the UWV anticipated that the event sector would suffer the greatest job losses in comparison to other sectors, and as predicted, approximately 54% of jobs were lost during the coronavirus period, as reported by Event Branche (2021).

Both sectors were affected by the virus and the associated measures, which led to significant human (mental and physical) and economic problems; the healthcare sector was under tremendous pressure, while in the events sector nothing could and should be done. Through the media, both sectors tried to bring their problems to light, and various stakeholders appeared in the media. The healthcare sector begged people to follow the measures and stay at home to relieve the pressure on the healthcare system (Het Parool, 2020), and the events sector launched a campaign named "Sound of Silence" to raise awareness of the devastating impact of the measures on this sector (Sokol, 2020). According to Coombs (2007), the media are the biggest shareholder in providing information to stakeholders regarding an issue, in this case, the coronavirus in the healthcare and event sector. The media's goals are to generate publicity, inform people, and, in some cases, entertain (Cornelissen, 2014; McCombs, 1997). The media prioritizes issues and acts as an agenda-setter (Bright & Bagley, 2017). By reaching the media, people will talk about certain topics in the healthcare and event sector, and this may end up on the political agenda.

The media determine what the public sees in the news about the coronavirus and where they talk about, thus setting the agenda, known as agenda setting. By emphasizing certain aspects of the crisis, the media shape a reality through a process called framing, where tone of voice can add an additional

layer to these messages. In the first year of the coronavirus, there were more than twenty press conferences in the Netherlands (Szasz, 2020). These press conferences varied from announcing lockdowns, vaccinations, the cancellation of events, to the gradual return to the "old" normal (Szasz, 2020). The crisis and the associated measures had direct or indirect effects on many stakeholders, as they were affected in their actions and experiences due to the virus, such as experiencing a high workload or being restricted from certain activities. Over the course of a year, a large amount of content about the coronavirus, both positive and negative, was published in the newspapers, highlighting various aspects and stakeholders. Considering the evolving nature of the measures and content over time, this study aims to examine how media content surrounding COVID-19 has changed concerning different aspects and stakeholders and how it has influenced the agenda-setting process in the first year of the pandemic.

In the past, research has been conducted on media reports surrounding crises, including the content of these crises and the stakeholders involved. Nijkrake, Gosselt, and Gutteling (2015) conducted research regarding the news frames, stakeholders, and tone of voice used during a bacterial outbreak crisis in a Dutch hospital, where hundreds of patients were infected with a bacteria. Kuttschreuter, Gutteling, and De Hond (2010) studied the firework disaster in Enschede in 2000, examining similar aspects in the media. These earlier studies provided insight into how the media communicates about a crisis. In this study related to the coronavirus pandemic, a media analysis addresses different news frames, stakeholders, and corresponding tones of voice for both the healthcare and event sectors, published between January 2020 and February 2021, which corresponds with the first year of the COVID-19 outbreak in the Netherlands. A media analysis gains insight into trends, shifts, and themes, comparing data over time and giving meaning to different patterns related to the news frames, stakeholders, and tone of voice (Altheide, 2000). This was done using the following research question:

RQ: How did the media display the healthcare and event sector over time during the first year of the COVID-19 pandemic in the Netherlands, in terms of news frames, stakeholders, and tone of voice?

Theoretical framework

Agenda-setting

The agenda-setting theory by McCombs and Shaw (1972) suggests that news media provide a significant amount of information when they report on various topics such as organisations, politics, economy, and social issues, and this can manipulate public awareness (Cornelissen, 2014). The media can determine what issues are considered important, leading to the manipulation of public perception (An & Gower, 2009; McCombs & Shaw, 1972). The theory has two fundamental assumptions. Firstly, media have an agenda and determines what news is more important than other news. Secondly, the public needs assistance in understanding and evaluating reality, which is filtered and shaped by the media (Dainton & Zelle, 2015; Poirier, Ouellet, Rancourt, & Béchar, 2020). The media are the largest provider of information to the public, and the public's opinion is influenced by the content displayed by the media over time, leading to an altered perception of certain issues (Coombs, 2007).

Insight into how the media shape public perception can be gained by analysing how the media have presented the same crisis in two different sectors over a certain period of time. For instance, stakeholders in the healthcare sector may have used the media to draw attention to the increasing coronavirus figures, while stakeholders from the events sector may have used the media to sound the alarm about the inability and prohibition to organize events. The media's filtered reality can cause certain aspects to be seen as more important than others, leading to public perceptions of the crisis that vary over time. In the first year of the coronavirus, there were over 20 press conferences in the Netherlands, which communicated various aspects including the discovery of the virus in the country, vaccinations, and the ban on events (Szasz, 2020). The media determine what aspects of these press conferences are covered in the newspapers, thereby influencing what enters the public and political agenda. The current study investigated how the Dutch newspapers portrayed the coronavirus crisis in the health and events sectors over time from January 2020 to February 2021, using the agenda-setting theory with the help of framing.

Framing

What is framing?

"Framing is the mass media's ability to highlight aspects of news stories by selecting, emphasizing, elaborating on, and even excluding news stories or parts of news stories to create a certain effect for the audience" (Dainton & Zelle, 2015, p. 234). Framing involves persuading an audience by emphasizing a specific interpretation and line of reasoning, as well as by referring to underlying cultural values or beliefs (Cornelissen, 2014). The media decide which aspects of the entire COVID-19 pandemic are highlighted in the media and thus which story about the virus is told (Gabore, 2020). For this study, the used frames by the media can help to understand how the coronavirus crisis has been displayed in the healthcare and event sectors and, thus, what is considered more important by the media. The news frames that are used by the media in a certain month can also help to understand how the public is assisted by understanding and evaluating the perceived reality, and if the frames have changed over time.

Different types of frames

Organising the large amount of information into smaller pieces regarding a topic is done with frames. Relevant studies related to the media have shown that there are a handful of non-specific frames that can help understand news events, which are the conflict, economic consequences, human-interest, morality, and responsibility frames (Semetko & Valkenburg, 2000). These news frames are known as

generic frames, which can be applied to a broad range of topics, including a crisis situation like the coronavirus disease (Neuman, Just, & Crigler, 1992; De Vreese, Peter, & Semetko, 2001). In addition to generic frames, issue-specific frames can also be found in media coverage which are highly specific and detailed with regard to an issue (Kozman, 2017). Fear, hope, and political news frames are expected to play a role in the news media related to COVID-19, since similar studies about these kinds of crises showed that these frames were used in media communication (Godefroidt et al., 2016; Ogbodo et al., 2020). For this study about the coronavirus in the Netherlands in the healthcare and events sector, eight news frames were used as shown in Table 1: conflict, economic consequences, human-interest, morality, responsibility, fear, hope, and politics.

Table 1
Overview of the news frames with definition

Frame	Definition
Conflict	Emphasising conflict between individuals, groups, or institutions as means of capturing audience interest.
Economic consequences	Reporting an event, problem, or issue in terms of the consequences it will have economically on an individual, group, institution, region, or country.
Human-interest	Bringing a human face or an emotional angle to the presentation of an event, issue, or problem.
Morality	Putting the event, problem, or issue in the context of religious tenets or moral prescriptions.
Responsibility	Presenting an issue or problem in such a way as to attribute responsibility for its cause or solution to either the government or to an individual or group.
Fear	Emphasising the fatal risks of infectious diseases without seeking to reassure the public.
Hope	Emphasising hope or comport among the public to reduce the dark and uncertainty regarding the crisis.
Politics	Adding political messages which highlights (inter) national relationships and other stakeholders in a political perspective.

The conflict frame "emphasizes conflict between individuals, groups, or institutions as a means of capturing audience interest" (Semetko & Valkenburg, 2000, p. 95). This frame is frequently used in newspapers to address conflicts of opinion between parties or to defend oneself against criticism. In the study of Kuttschreuter et al. (2011), the media coverage of the fireworks disaster in Enschede was studied, and this frame was frequently used to address conflicts between the public and the government regarding safety policies, the overall quality of safety, and disaster management. In this study of COVID-19 in the healthcare and event sector, it is expected that this frame is present in the media since different measures to combat the virus were implemented, which may lead to conflicts between proponents and opponents in both sectors (Sociaal en Cultureel Planbureau, 2021).

The economic consequences frame "reports an event, problem, or issue in terms of the consequences it will have economically on an individual, group, institution, region, or country" (Semetko & Valkenburg, 2000, p. 96). The economic consequences frame stimulates conversations about the costs of the issue, whereby this frame emphasized the costs of the crisis, mentioning the financial losses or gains of the crisis now or later, or referencing the economic consequences of specific actions was another way of using this frame (Nijkrake et al., 2015). The economic consequences frame is expected to be prominent in the healthcare sector due to the vulnerable healthcare system and in the event sector since no events were allowed to be organized anymore (Goudsmit, 2020; RTL Nieuws, 2020). It

can be expected that the media will use the economic consequences frame more in the event sector than in the healthcare sector, due to the core businesses of the sectors (i.e., entertainment vs. healthcare). In the news coverage related to the healthcare sector, other frames more linked to healthcare will probably be used more.

The human-interest frame "brings a human face or an emotional angle to the presentation of an event, issue, or problem" (Semetko & Valkenburg, 2000, p. 95). Nijkraake et al. (2015) state that this frame can stimulate the public's emotional response toward the crisis since this frame is often used in a victim-related crisis. A victim-related crisis is a crisis wherein the organisation along with its stakeholders become the victim of the crisis, such as a natural disaster (Coombs, 2007). Brunken's (2006) study regarding media coverage about Hurricane Katrina showed that this frame was commonly used and was prominent throughout the disaster because of the involved health issues and mortality rates. The coronavirus crisis is also a victim-related crisis, since the Netherlands and the Dutch government became victims of the virus, and therefore its stakeholders in the healthcare and event sector. It is expected that this frame will be present and prominent in both sectors during the timeframe in which the media communicated about the virus, based on previous studies such as Brunken (2006), and show personal stories from people who are affected by the crisis.

The morality frame "puts the event, problem, or issue in the context of religious tenets or moral prescriptions" (Semetko & Valkenburg, 2000, p. 96), and is mostly used via quotations or inference (Nijkraake et al., 2015). Semetko and Valkenburg (2000) stated that this frame is mostly used by governments to legitimize their actions, positions, and choices. In times of a disaster, people are looking for faith, in some cases using religion, to raise faith-based optimism, such as President Bush told the American citizens during Hurricane Katrina: "We act with God's grace" (Brunken, 2006). However, the usage of this frame has been questioned due to the low frequency of the frame in previous studies (Godefroidt et al., 2016). In this study related to the coronavirus disease in the Netherlands related to the healthcare and event sector, the frame might be used to legitimize the lockdown by giving facts about the increasing risks of the virus and why certain measures are needed (Van der Aa & Winterman, 2020). Moral expressions help for example, understand the issues about COVID-19 vaccination issues (Zhang, Wang, and Liu, 2023). Messages in media coverage that have a moral basis are value-based and can appeal to the moral core of individuals, which in turn influences people's reactions (Hopp et al., 2021). Since morality frames can influence people's reactions, it might be present in the news articles about the COVID-19 virus in the Netherlands and help combat the virus.

The responsibility frame "presents an issue or problem in such a way as to attribute responsibility for its cause or solution to either the government or to an individual or group" (Semetko & Valkenburg, 2000, p. 96). This frame can provide better insight into which stakeholders are held responsible for causing specific problems related to the crisis (Nijkraake et al., 2015). Kuttschreuter et al. (2011) stated that the stakeholders' responsibility regarding the crisis was highlighted with this frame. This happened with the Dutch government concerning the fireworks disaster in 2000. The media held the government responsible for the disaster due to existing general safety problems, facilities, and government policies related to fireworks (Kuttschreuter et al., 2011). In this study related to COVID-19 in the healthcare and event sector, this frame might be present as well and display whether Dutch citizens are obeying or disobeying the measures, and whether the government is taking responsibility for certain actions.

Fear frames "emphasize the fatal risks of infectious diseases without seeking to reassure the public" (Moon et al., 2020, p. 49). The media seek attention from the public by adding fear to the content, since fear can cause more problems during a pandemic than the virus itself (Ogbodo et al., 2020). Fear frames related to media content about the coronavirus can be seen in a study by Ogbodo et al. (2020), where the frame was used when President Xi Jinping warned the Chinese citizens about the second

wave of infections caused by the coronavirus. Media articles about COVID-19 in the healthcare and event sector could show this frame in a comparable way. For example when Mark Rutte gives a press conference about the upcoming third wave of infections and the associated problems, which might cause fear among the Dutch citizens (Den Hartog, 2020). Mortality rates of the virus are in line with the concept of fear since it emphasizes the fatal risks of the coronavirus. Mortality rates and fear are more likely linked to the healthcare sector, since the sector aims to provide needed care, ensure quality care, offer affordable care, and prevent diseases and thus care burden. Compared to entertainment as the core business of the event sector, the fear frame should be more present in the news articles regarding the healthcare sector than in the event sector.

The hope frame emphasizes hope or comfort among the public to reduce the darkness and uncertainty regarding the crisis (Ogbodo et al., 2020). "Hope is an essential countermeasure that soothes the public even in a clearly overwhelming situation of the COVID-19 health crisis" (Ogbodo et al., 2020, p. 262). According to Onwe et al. (2020), hope is an essential countermeasure since hope and comfort help people survive tough times, including the lockdown in the Netherlands. In this study regarding the healthcare and event sector, this frame is expected to be found in the news articles when the number of infected people decreases or when there will be ease in measures so people can organize events again (NOS, 2020a; Rijksoverheid, 2021). The decrease in infections and the reduction of coronavirus measures should ensure that citizens have more hope for a good outcome of the crisis.

Politics frames add political messages that highlight (inter)national relationships and other stakeholders' political perspectives. They are used when discussing the crisis and the country, political parties and persons, and the related actions of politics (Adekunle & Adnan, 2016; Godefroidt et al., 2016). Comparable studies have shown that politics plays a prominent role in media coverage, such as in a study about the Syrian war. The high appearance of this frame is due to the unpredictable and drastic changes in (inter)national relationships caused by the Syrian war and the effects of political measures (Godefroidt et al., 2016). The coronavirus disease has also brought dramatic changes in (inter)national relationships caused by implemented measures, such as the negative travel advice (Van der Aa & Den Hartog, 2020) and the ban on events. As the Dutch government has played a crucial role in the pandemic and implemented measures, it is expected that the politics news frame will be present in newspapers throughout the entire duration of the pandemic. Both the healthcare and event sectors have been affected to varying degrees by the implied measures of the Dutch government. Therefore, it was expected that the use of political frames would increase when corona measures were announced.

Stakeholders

In addition to the various frames used by the media to present news, the media also make choices about which stakeholders they do or do not discuss in their articles. "A stakeholder or stakeholders are any individual or group who can affect or is affected by the achievement of the organisation's objectives" (Cornelissen, 2014, p. 284). There are two types of stakeholders: internal and external. Internal stakeholders are those from within the organisation who have a direct relationship with the organisation, such as employees (Gosselt, 2020; Nijkrake, 2013). External stakeholders are those from outside the organisation who do not have a direct relationship with the organisation, such as customers (Gosselt, 2020; Nijkrake, 2013). The role of stakeholders and their connection to a crisis situation has been studied in the past. For example, Nijkrake (2013) researched the bacterial outbreak in a Dutch hospital and the effects of communication on the involved stakeholders. In Nijkrake's study, a list of stakeholders was compiled using a descriptive stakeholder analysis method, which is a framework for identifying and describing stakeholders involved or affected by a project, program, or organisation, and involves systematically gathering information about stakeholders (Gosselt, 2020;

Reed et al., 2009). Descriptive stakeholder analysis is a useful tool for gaining a deeper understanding of the diverse range of stakeholders involved in a project or organisation and for identifying strategies for effectively engaging and addressing their needs (Reed et al., 2009). In this study on the coronavirus in the healthcare and events sectors, certain stakeholders, as mentioned in the introduction, will play a role in the media.

Tone of voice

The media can decide how to frame information and the corona pandemic to the audience, including whether or not they discuss the relevant stakeholders. Additionally, they can also use tone of voice to influence the public's opinion (Nijkrake et al., 2015). A positive tone of voice can be recognized by a favourable tone towards the content of the media article or the stakeholder, which indicates support for the actions (Deephouse, 2000; Ki & Nekmat, 2014). A positive tone of voice can help to turn around negative opinions related to the stakeholder or the organisation affected by a crisis (González-Herrero & Smith, 2008). Yang, Kang, and Johnson (2010) stated that a positive tone of voice helps to improve the stakeholder's acceptance in the crisis, improve the public's attitude towards the stakeholder, and it helps to spread more positive word-of-mouth communication. A negative tone of voice shows an unfavourable tone towards the media content or the stakeholder, wherein anger, unhappiness, blame, or scepticism can be found (Deephouse, 2000; Ki & Nekmat, 2014). When the public is exposed to a negative tone of voice in the media, they will form unfavourable perceptions towards the stakeholder (Kim, Carvalho, & Cooksey, 2007). Additionally, the negative tone of voice affects the public support for the stakeholder's current and future concerns, since their trust is affected (Kim et al., 2007). When the tone cannot be placed into one of these categories, the tone can be defined as neutral (Deephouse, 2000; Ki & Nekmat, 2014).

Tone of voice and news frames

Looking at media coverage from studies about crises, it was shown that in times of crisis, the overall tone of voice of media content was negatively framed (Nijkrake et al., 2015). Since the COVID-19 crisis is a similar crisis, it was expected that the overall tone of voice in media coverage will be negative in the healthcare and event sectors. Besides the overall tone of voice of the news article, the different news frames can also be framed with a certain tone of voice. To illustrate, when utilizing the economic consequences frame, a positive tone of voice would highlight the economic benefits of an issue, while a negative tone of voice would emphasize the economic losses.

Tone of voice and stakeholders

The tone of voice towards stakeholders can also be affected. Since the tone of voice is a way of adding a feeling to communication in the news media, it can be assumed that media communication related to the coronavirus disease also has different tones of voice. The tone of voice towards stakeholders in this research is expected to be portrayed as neutral or negative since comparable studies in the past have shown this (Nijkrake et al., 2015; Kuttschreuter et al., 2011). The main reason for this outcome has to do with the high number of neutrally framed tones of voice towards the stakeholders.

Method

Study design

This study explored the presence of news frames, stakeholders, and the tone of voice towards these aspects in Dutch newspapers in two different sectors: healthcare and events. A qualitative research method was used to investigate the data and corresponding research question, namely a media content analysis. Deeper meaning, patterns, and processes can be found with the help of media analysis (Altheide, 2000). Altheide (2000) stated that media analysis gives insight into comparative searching over time, enumerating trends and shifts, and giving meaning to these different patterns and themes, which connects with the goal of this study; discover and describe the findings posted in the media.

Corpus of content

The corpus of this study consisted of 400 news articles. These articles contained content about COVID-19 in the Netherlands. Half of the news articles were related to the healthcare sector and the other half were related to the event sector. The articles in the corpus were published in one of the following Dutch newspapers: Algemeen Dagblad (AD), NRC Handelsblad (NRC), Telegraaf, and Volkskrant. These four newspapers were chosen due to their popularity and reach (Beste Krant, 2023). All news articles were published between the 31st of January 2020 and the 28th of February 2021. The distribution of newspapers and sectors can be found in Table 2.

Table 2

Overview of the newspaper articles and sectors

Newspaper	Healthcare sector	Event sector	Total
AD	57	55	112
NRC	44	53	97
Telegraaf	63	51	114
Volkskrant	36	41	77
Total	200	200	400

Codebook development

The created codebook consisted of several different components, namely the general information about the newspaper article, news frames, stakeholders, and associated tone of voice. The first part of the codebook was dedicated to the general information, including the sector (healthcare or event), newspaper date, and an article number. Secondly, literature review revealed that the generic frames identified by Semetko and Valkenburg in 2000 (Conflict, economic consequences, human-interest, morality, and responsibility) would be present in the media content, along with issue-specific frames about fear, hope, and politics. Lastly, the codebook included a list of stakeholders. The list of relevant stakeholders for this COVID-19 study was developed using a descriptive stakeholder analysis. Similar studies on stakeholders in a crisis, such as those by Nijkrake (2013), Kuttschreuter et al. (2011), and Ogbodo (2020), were consulted to identify the relevant stakeholders. These were then supplemented with stakeholders found in media reports on the virus. The presence of stakeholders, as presented in Table 3, was examined in media coverage of the coronavirus in the healthcare and events sectors. In Appendix A the entire codebook can be found, including the definitions and examples of the different codes.

Table 3*Overview of the stakeholders with definition*

Stakeholder (Type)	Definition
Advisory boards (Extern)	Any advisory board of the government.
Customer/clients (Extern)	Anyone who makes use of the products/services of the companies.
Employees (Intern)	Any person that is working in the concerned sector.
Government (Extern)	The Dutch government, minister or other political parties.
Management (Intern)	The management or a person of the management of a company.
Media (Extern)	Any type of media, this can be online or offline.
Sector alliances (Extern)	Any sector alliance of the concerned sector.
Sector/organisation (Intern)	The entire sector or an organisation/business in general.
Society (Intern)	The Dutch society as a whole or a part of it.
Specialists (Extern)	A person/organisation who has knowledge about the matter.

Procedure

The procedure of this study consisted of three main steps. First, the corpus of the dataset was collected using LexisUni, a database containing current and historical information from (inter)national newspapers (LexisUni, n.d.). Two search queries were used to collect the data for each sector, using specific keywords related to healthcare and event sectors and COVID-19. The search query for the healthcare sector contained the following keywords: (gezondheidssector OR gezondheidszorg OR gezondheid*) AND (Nederland) AND (corona OR COVID*), while the search query for the event sector contained the following keywords: (Evenementen sector OR Event sector OR evenement*) AND (Nederland) AND (corona OR COVID*). The data was filtered to ensure that only articles published between January 2020 and March 2021 were included, and the four chosen Dutch newspapers were searched for relevant articles. Second, the raw dataset was cleaned to remove irrelevant and duplicate articles. This was done by scanning the articles for relevance and uniqueness. The distribution of the newspapers in the cleaned dataset reflected the same percentage ratio as the original dataset, with Telegraaf being the most represented and Volkskrant being the least represented. Finally, the data was analysed using a codebook outlined in Appendix A.

Analysis

Thematic analysis was applied to systematically analyse the dataset. This type of analysis is useful for studies that focus on finding patterns and themes in datasets, data interpretation, deductive approaches, coding, and categorizing (Alhojailan, 2012). Firstly, the codebook for this study was prepared. The codebook was established by finding related studies in the literature that focused on crises in general or specifically on the coronavirus. The components in the codebook were news frames, stakeholders, and tone of voice, as mentioned in Tables 1 and 2. The complete codebook can be found in Appendix A, which contains the coding scheme, definitions, and examples of the different sections. Secondly, a pre-test was performed to test the reliability of the established codebook. This test was conducted on a random 10% of the dataset. Two independent coders used the codebook to code the news articles. The outcome of the test showed Cohen's Kappa scores between .74 and .91, which indicates that the codes in the codebook were reliable. The different Cohen's Kappa and Inter-Agreement scores can be found in Table 4.

Table 4*Overview of Cohen's Kappa scores and inter-agreement scores (IA)*

Code	Cohen's Kappa	IA
News frames	0.74	78%
Stakeholders		
Advisory board	0.90	95%
Customer / client	0.91	97%
Employee	0.82	93%
Government	0.85	95%
Management	0.90	95%
Media	0.86	95%
Sector / organisation	0.88	97%
Sector alliance	0.83	92%
Society	0.89	95%
Specialists	0.83	92%
Tone of voice news frames	0.80	87%
Tone of voice stakeholders	0.71	90%

Thirdly, all the news articles were uploaded into ATLAS.ti (2020). This is a software program that can be used for coding datasets. Eight different projects were created in ATLAS.ti, each containing a newspaper and sector, such as AD and healthcare sector. All the uploaded articles were given an article number and date. After that, one news frame code and tone of voice towards that frame were assigned to each paragraph. In some of the paragraphs, multiple news frames were present. In that case, the most prominent one was assigned. This step was repeated for all the news frames. After completing the news frames, the news articles were coded as a whole on the presence of stakeholders including the tone of voice towards that stakeholder.

Results

News frames and tone of voice

The news frame that was most prominent in the total dataset (healthcare and event sector combined) was the responsibility frame, which covered 17.9% of the content in the news articles. Followed by human-interest (17.3%) and conflict (15.6%) frames. The least applied frame was the morality frame with 3.2%. A significant relation was found between the news frames in the healthcare and event sector, $X^2(7, n = 4239) = 463.30, p < .001$, which indicates that there are differences between the two sectors and the frames that are used during the first year of the pandemic. Table 5 shows the presence of the news frames as a whole and per sector.

Table 5

Presence of the news frames in the healthcare and event sector

News frame	Total		Healthcare sector		Event sector	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Conflict	15.6%	661	18.6%	418	12.2%	243
Economic consequences	14.0%	593	7.7%	173	21.1%	420
Human-interest	17.3%	735	13.5%	304	21.7%	431
Morality	3.2%	135	4.5%	102	1.7%	33
Responsibility	17.9%	760	19.8%	446	15.8%	314
Fear	8.9%	376	11.9%	269	5.4%	107
Hope	15.3%	650	17.2%	387	13.2%	263
Politics	7.8%	329	6.8%	153	8.9%	176
Total	100%	4239	100%	2252	100%	1987

Most used news frames in the healthcare sector

This study showed that the healthcare sector was mostly framed in terms of responsibility (19.8%), conflict (18.6%), and hope (17.2%). The responsibility frame was used to attribute responsibility for an action, such as "The virus has an enormous impact on our society. It is essential for all of us to take responsibility and act accordingly. This primarily involves adopting the right behaviour, and the measures implemented should facilitate that." This quote from one of the news articles showed how taking responsibility towards the measures will help contain the virus. Conflict frames in the healthcare sector showed disputes between different stakeholders in the coronavirus crisis, such as "Those critical voices are getting louder after a year of corona. Also from medical circles. There seems to be a limit to what citizens will still accept." As can be seen, conflicts arose due to the corona virus from citizens and medics towards the measures. Hope frames contained content about keeping faith in a good outcome of the pandemic and reducing uncertainties regarding the coronavirus, such as "The speed at which it is spreading has really slowed down. That in itself is a good development." In the healthcare sector, morality was the least present, with 4.5%. The healthcare sector faced certain moral dilemmas as a result of the pandemic, but the framing of these issues was not prominent. An example of the use of the morality frame is, Mayor John Jorritsma of Eindhoven referred to one such dilemma as "a diabolical dilemma."

Most used news frames in the event sector

The most prominent news frames in the event sector were human-interest (21.7%), economic consequences (21.1%), and responsibility (15.8%). Human-interest stories in the event sector were about people who could not participate in their favourite event or other stories with an emotional angle, such as "The comedian had just returned after three years. I came out of that writing tunnel."

Finally, finally back outside. Into the field, playing, laughing faces, applause, confirmation, but no, nothing, none of that. It became at home on the couch". Here, it can be seen that the comedian could not experience his comeback as he envisioned, due to the pandemic. Economic consequences in the event sector gave more insight into the economic effects of the pandemic, such as bankruptcies. For example, "Companies in danger of financial trouble can ask the government to guarantee loans." Here, it can be seen that companies are in financial need due to COVID-19. The responsibility frame showed in this sector that people did or did not take responsibility in relation to the measures, such as in the case of companies like KPN, "Providers KPN, VodafoneZiggo, and T-Mobile are cancelling internal events and minimizing physical meetings". Here, it can be seen that companies do take responsibility towards the implemented measures. Organising events was prohibited and working from home became the norm for many companies, something that the above-mentioned companies did, thereby taking responsibility and adhering to the COVID-19 regulations. Just like in the healthcare sector, morality was the least used, accounting for only 1.7% of the content. Morality showed dilemmas regarding the pandemic, such as "That is not only true with this coronavirus outbreak. Sports organisations in general may be more aware of the vulnerability of top athletes, Olfers believes. 'It is a duty to ask yourself: are we taking good care of our athletes?'"

Less prominent used news frames in both sectors

In addition to the most common news frames in both sectors, fear and politics also play a role in this study, but are not among the most commonly used frames. The news frame about fear showed in both sectors that a certain way of fear was visible in the messages, for example by displaying the mortality and mortality rates. This was evident in the following quote: "The RIVM recorded 2364 new positive corona tests yesterday. The number of COVID-19 patients in hospitals increased significantly". The mortality rates of the coronavirus in the Netherlands between January 2020 and February 2021 are displayed in Table 6 (CBS, 2021a). ^a No data was collected for the months of January 2020 and February 2020, as there was still too little known about the virus and the mortality rates could not be linked to COVID-19.

Table 6
Monthly COVID-19 mortality rates in the Netherlands

Month	COVID-19 mortality rates	Month	COVID-19 mortality rates
2020 January	0 ^a	2020 August	133
2020 February	0 ^a	2020 September	301
2020 March	1715	2020 October	2045
2020 April	4871	2020 November	3141
2020 May	1113	2020 December	3883
2020 June	194	2021 January	4354
2020 July	67	2021 February	2498

The politics frame showed in both sectors which coronavirus measures were implemented by the government. This is evident in the following quote: "There is now clarity in the art world. The government announced that all gatherings will be prohibited until June 1st due to the coronavirus crisis, and therefore all theatre performances, exhibitions, concerts and festivals have been removed from the agenda until then.". During the coronavirus period in the Netherlands, many different measures were implemented to combat the virus. In Table 7, the main and largest measures for each month are indicated, based on information from the Rijksoverheid (n.d.).

Table 7*Overview monthly coronavirus measures in the Netherlands*

Month	Activity
2020 January	First signals corona
2020 February	First corona contamination in the Netherlands
2020 March	Measures against spread of corona virus, intelligent lockdown
2020 April	Extension of measures announcement and expansion of testing policy
2020 May	Economic impact, financial support, and relaxation of measures
2020 June	Relaxation of corona measures and testing for all
2020 July	A 'one-and-a-half-meter summer' and slowly increasing infections
2020 August	'We are done with the virus, but the virus is not yet done with us'
2020 September	Tightened measures still needed
2020 October	Second wave and partial lockdown
2020 November	Aggravation and extension of partial lockdown
2020 December	Lockdown during holidays and mutation of virus emerges in UK
2021 January	Introduction of curfew and start of vaccination
2021 February	Extension of lockdown and increased focus on socioeconomic impact

Tone of voice and news frames

The dataset of the study was mostly framed with negative frames, namely with 43.0% of the news frames. This was followed by positive (33.1%) and neutral (23.9%) frames. This distribution of the tone of voice towards the news frames was approximately the same in both the healthcare and event sector.

Table 8*Tone of voice combined with news frames*

Tone of voice	Total		Healthcare sector		Event sector	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Negative	43.0%	1835	43.2%	974	42.7%	861
Neutral	23.9%	1022	26.5%	597	21.1%	425
Positive	33.1%	1413	30.3%	682	36.2%	731
Total	100%	4270	100%	2253	100%	2017

The tone of voice towards the news frames was assessed with a 3-point Likert scale ranging from -1 to +1 (Table 9). Negative tone of voice was indicated by values from -1 to -0.4, neutral from -0.3 to +0.3, and positive from +0.4 to +1. In both sectors, conflict, economic consequences, and fear were mostly used in with a negative tone of voice. Hope and responsibility were used in most cases in positive tone of voice. Finally, human-interest, morality and politics were mostly used in neutral tone of voice.

Table 9*Mean scores tone of voice towards news frames*

News frame	Total	Healthcare sector	Event sector
Conflict	-0.6	-0.6	-0.7
Economic consequences	-0.4	-0.4	-0.4
Human-interest	-0.2	-0.3	-0.0
Morality	-0.1	-0.1	-0.1
Responsibility	+0.5	+0.4	+0.6
Fear	-0.8	-1.0	-0.9
Hope	+0.5	+0.4	+0.6
Politics	-0.2	-0.2	-0.2

Note. 3-point Likert scale -1 <> +1

Negatively used news frames

The study revealed that negatively framed conflicts tended to involve instances of incorrect information, dissatisfaction with measures, and a lack of appropriate solutions. For instance, some people claimed that COVID-19 only affected the elderly and vulnerable, which is not entirely true. In terms of negatively framed economic consequences, the study found that industries such as hospitality, events, and shops were taking heavy blows due to the COVID-19 pandemic, resulting in significant costs. Fear, when combined with a negative tone of voice, was often associated with increasing morbidity and mortality rates. For example, during a press conference, "Prime Minister Rutte stated that many Dutch people would contract the virus".

Positively used news frames

A positive use of the hope frame indicated a return to the "old" situation and the reopening of the hospitality industry, as seen in the statement: "Hugo de Jonge hinted cautiously that by that time perhaps more visitors may be allowed to gather together than now, or that perhaps a part of the hospitality industry (such as restaurants) may open again.". A positive use of the responsibility frame showed that someone was taking responsibility for their actions or ensuring that others were following the rules, as in the statement: "Travelers are massively postponing or cancelling their trips.".

Neutrally used news frames

A neutral use of the human-interest frame is paying attention to someone in the news articles, without giving a clear positive or negative tone of voice towards the text: "I am training for the marathon, preferably the one in Amsterdam. It is not certain yet if it will take place, but I will continue regardless. Currently, I am running 60 kilometres per week. It's going well, I am running longer distances with less pain - I am recovering from a meniscus injury.". A neutral usage of the morality frame presented a dilemma and showed both sides, for example: "While sitting in the park or getting a haircut once may not pose the biggest risks, resuming nightlife activities could easily cause a new surge of infections.". The usage of a neutral tone and a political frame provided information about measures, but did not take a clear stance on whether they were beneficial or not, as illustrated by the newspaper article: "Minister De Jonge of Health sent a letter to the Dutch House of Representatives on Friday, unveiling the vaccination strategy.".

Stakeholders and tone of voice

The stakeholders that were most prominent in the total dataset (healthcare and event sector) were employees (76.0%), customers/clients (76.0%), and specialists (75.5%). Management was the least mentioned in the news articles and was present in only 21.3%. A significant relation between the use of stakeholders in the different sectors was found, $\chi^2(9, n = 400) = 58.27, p < .001$, which indicates that there are differences in the stakeholders mentioned in both sectors. This study showed that in the healthcare sector, specialists (80.5%) were the most commonly mentioned stakeholder, followed by advisory boards (77.5%) and customers/clients (77.0%). The least mentioned stakeholders in the healthcare sector were management, which appeared in only 16.5% of the news articles. In the event sector, this study showed that employees were the most commonly mentioned stakeholders at 86.5%, followed by the sector/organisation (83.5%) and customers/clients (75.0%). Management was the least frequently mentioned stakeholder in the media, appearing in only 26.0% of the articles. Table 10 shows the presence of different stakeholders in the healthcare and event sectors.

Table 10*Presence of the stakeholders in the healthcare and event sector*

Stakeholder	Total		Healthcare sector		Event sector	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Advisory boards	61.3%	245	77.5%	155	45.0%	90
Customer/clients	76.0%	304	77.0%	154	75.0%	150
Employees	76.0%	304	65.5%	131	86.5%	173
Government	62.8%	251	59.0%	118	66.5%	133
Management	21.3%	85	16.5%	33	26.0%	52
Media	22.5%	90	18.5%	37	26.5%	53
Sector alliances	44.8%	179	39.5%	79	50.0%	100
Sector/organisation	75.3%	301	67.0%	134	83.5%	167
Society	69.3%	277	69.5%	139	69.0%	138
Specialists	75.5%	302	80.5%	61	70.5%	141

Tone of voice and stakeholders

In this study, stakeholders were mostly mentioned in a neutral way (63.5%), followed by positive mentions (25.9%), and negative mentions were the minority (10.6%). This distribution was found in both the healthcare sector and the event sector (the entire distribution can be found in Table 11).

Table 11*Tone of voice combined with stakeholders*

Stakeholders	Total		Healthcare sector		Event sector	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Negative	10.6%	233	13.7%	138	7.9%	95
Neutral	63.5%	1403	54.8%	552	70.9%	851
Positive	25.9%	572	31.5%	317	21.2%	255
Total	100%	2208	100%	1007	100%	1201

This study showed that the overall picture of all stakeholders was neutral. The mean scores for the tone of voice towards the news frames were calculated with a 3-point Likert with values ranging from -1 to +1. Values from -1 to -0.4 are considered as negative tone of voice, values from -0.3 to +0.3 as neutral, and values from +0.4 to +1 as positive. When looking at mean scores of the individual stakeholders, it is also evident that all stakeholders are portrayed in a neutral tone of voice in the media. Except the specialists with a positive tone of voice in the overall picture and in the healthcare sector. The total overview of the mean scores can be found in Table 12.

Table 12*Mean scores tone of voice towards stakeholders*

News frame	Total	Healthcare sector	Event sector
Advisory boards	+0.2	+0.3	+0.2
Customer/clients	+0.0	+0.0	+0.0
Employees	+0.1	+0.2	+0.1
Government	+0.1	+0.2	+0.0
Management	+0.2	+0.2	+0.2
Media	+0.1	+0.1	+0.1
Sector alliances	+0.3	+0.3	+0.2
Sector/organisation	+0.1	+0.1	+0.1
Society	-0.1	-0.1	+0.0
Specialists	+0.4	+0.4	+0.3

Note. 3-point Likert scale -1 <> +1

Timeline of the news frames

Timeline of the healthcare sector

The timeline of the monthly usage of news frames along with the corona mortality rates in the healthcare sector is presented in Figure 1. The study revealed that the different news frames experienced similar peaks and troughs at the same time points in the timeline. The study demonstrated that during the initial period of the pandemic, roughly from March 2020 to April 2020, all news frames experienced a peak in usage. However, this trend decreased during the summer period of 2020 (May, June, July, and August) when the frames were used less frequently or not at all. Towards the end of summer 2020, the usage of news frames increased again, and a peak was observed later in the timeline. This pattern mirrored the mortality rates, which peaked at mortality rate of 4,871 in April 2020, experienced fewer reports in the summer period, and increased again by the end of summer, continuing to rise until January 2021 (Figure 1).

In August 2020, the responsibility and conflict frames reached another peak while the other frames were in a trough, despite the low mortality rates in the Netherlands at that time with a mortality rate of 1,113. Another peak identified in the study was the conflict frame in January 2021, which was also significantly higher than the other frames for that month. This pattern corresponded to the peak in the mortality rate observed in January 2021. Throughout the timeline, it can be observed that the news frames related to conflict, responsibility, and hope were the most frequently used compared to the other frames, as they were used more often in each month.

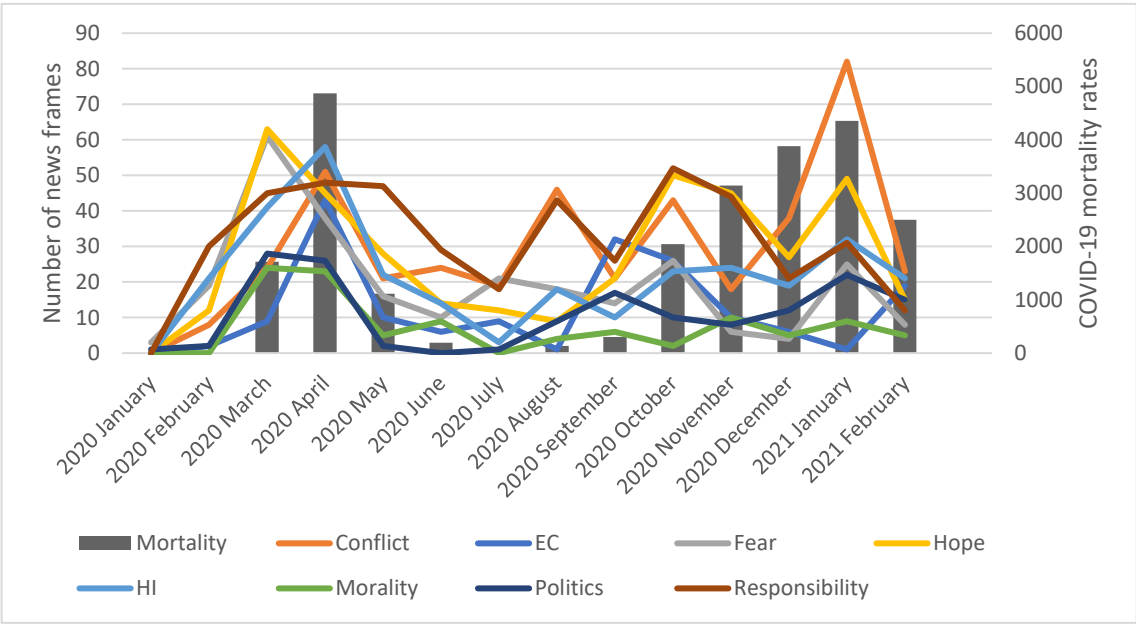


Figure 1. Timeline healthcare sector

Timeline of the event sector

In Figure 2 below, the timeline of the used news frames in each month has been plotted for the event sector, together with COVID-19 mortality rates. The event sector showed that the news frames in each month peaks and troughs at the same moments. This study started with peaks of nearly all the news frames in March 2020, and then decreased in usage till the upcoming months until May 2020. In the period between May 2020 and August 2020, most of the news frames were not commonly used, or nearly absent. Looking at the mortality rates in the months between May 2020 and August 2020, the numbers were also low, just like most of the news frames. In the final months of the timeline, from November 2020 to January 2021, the mortality rates were higher than the used news frames in those

months. However, in Figure 2, it can be seen that the plotted mortality rates are not in line with the peaks and troughs of the news frames.

The economic consequences frame in this study was at its highest point in March 2020, and throughout the timeline, this frame was most present in that month. The peak related to the economic consequences frame was twice as large as the second-largest peak observed in March 2020, which was the politics frame. In the summer period (June, July, and August 2020), most frames were not used that much, which is in line with the mortality rates in that period. However, the human-interest and economic consequences frames were very prominent in the media coverage during this time period. Another aspect was the rapid decline of the economic consequences frame from October 2020 to November 2020. On one hand, the economic consequences frame was often one of the more frequently used frames. However, in October 2020 and November 2020, the economic consequences frame was actually one of the least used frames.

The fear frame was present in the event sector in the beginning of this study. But after that, the use of fear in the media decreased more and more. In the months of November 2020 and December 2020, this frame was almost absent, and it rose slightly in the last months. The fear frame contained information about the mortality rates but did not show the same peaks and troughs as the mortality rates.

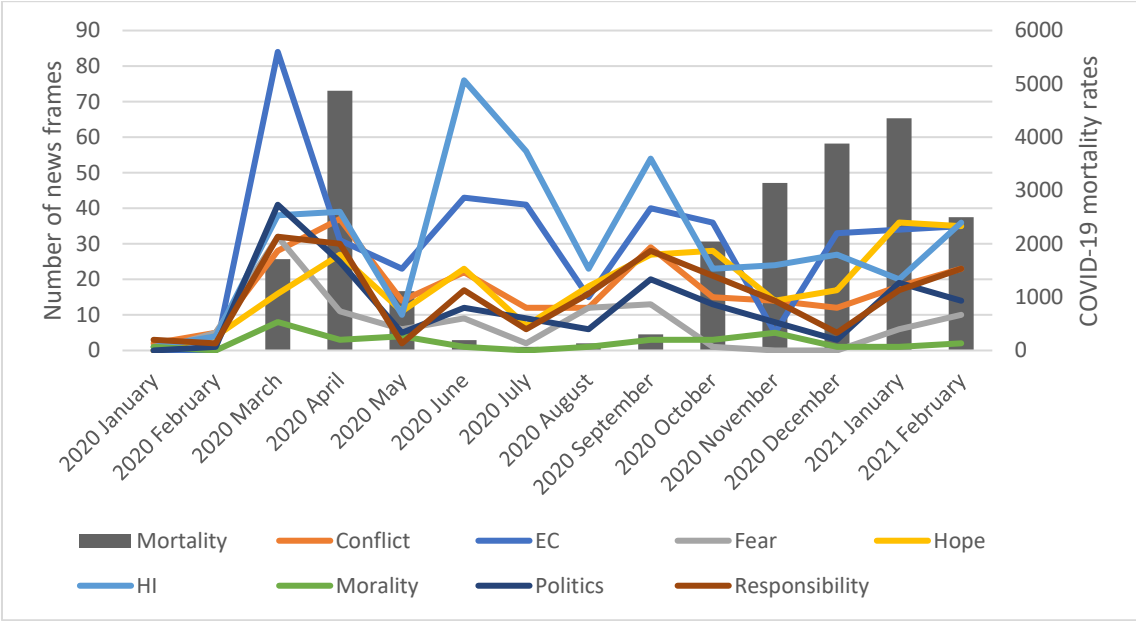


Figure 2. Timeline event sector

Discussion

News frames

News frames and tone of voice in the healthcare and event sectors were analysed in this study, through media content analysis. The most frequently used news frames in the healthcare sector were responsibility, conflict, and hope frames. The morality frame was the least present in the healthcare sector. The most frequently used news frames in the event sector were human-interest, economic consequences, and responsibility frames, while the morality frame was the least present.

Generic news frames

It was expected that the generic frames would be present in media reports, as they can be applied to a broad range of topics, including a crisis situation like the coronavirus disease. Looking at the results of this study, it is noticeable that the most common news frames in the two sectors are generic frames. However, two of these frames deviated from the expectations, namely economic-consequences and morality frames.

The economic consequences frame was highly present in the event sector, while in the healthcare sector it was one of the least present frames in this study. In the literature, it was expected that economic consequences would be more present in media articles about the healthcare sector due to the large costs in the supply chain of hospitals (Hubner, 2021). However, this study showed that other news frames were used more frequently in the healthcare sector. One plausible reason for caution about the use of economic frames in the healthcare sector may be related to the issue of fake news and the reliability of the media. Nowadays, there is an increasing amount of fake news in the media, both posted consciously and unconsciously, which is something that journalists struggle with (NPO Radio 1, 2022). This makes journalists more aware of how they word things so that their messages are not considered fake or unreliable. It is also important for readers to check messages for evidence outside the media, as fake news undermines the credibility of established news media. When news consumers are bombarded by a deluge of online reports, some of which are objective accounts and some of which are complete fiction, they are more likely to read everything with the same scepticism and distrust (Su et al., 2021). Maintaining reliability is crucial for the media, as they play a vital role in informing the public. Additionally, traditional newspapers are currently still the second most reliable news source (Counter Collective, 2020).

The usage of morality frames in both sectors was not in line with the expectations from the literature in this study. Previous studies had already questioned whether the morality frame should be considered in future studies since it was not commonly used in similar crisis-related studies (Godefroidt et al. 2016). Despite this, the morality frame was included in this study because of the unique situation of the crisis. Since the coronavirus pandemic was a new and uncommon situation in the Netherlands, and according to Zhang et al. (2023), it was expected that moral expression could help to better understand the new and unique situation. Nonetheless, the morality frame did not appear frequently in this study on coronavirus. The results of this study showed that the media in both sectors chose different frames to inform the public about this unique situation than using the morality frame.

Issue-specific news frames

Fear, hope, and politics were expected to be present in the media based on the literature. The hope frame met the expectations as it was used to keep faith in a positive outcome of the pandemic and to reduce uncertainties about the coronavirus. The fear and politics frames deviated from the expectations in the literature. The fear frame was expected to be present in both sectors to emphasize

the fatal risks and show more about the mortality rates related to COVID-19 (Moon et al., 2020). In this study, the fear frame was one of the most used news frames in the healthcare sector, and it showed the reader more about these figures and numbers. In the event sector, this frame was not as commonly present as expected, as this frame was the second least used. The reason for the difference in the use of fear between healthcare and event sector may be related to their core business. Mortality and mortality rates are more closely associated with the healthcare sector, since these rates indicate the health status in a population. Whereas in the event sector, other frames like economic consequences are more commonly utilized, as revealed by the media analysis conducted.

The politics frame was one of the less present frames in the healthcare and event sectors, whereas the findings in the literature showed that politics are oftentimes highly present in previous crisis-related situations. The study by Godefroidt et al. (2016) highlights the significance of political decisions in managing crises, and therefore, political decision-making has been taken into account in the media analysis conducted in this study. The lack of the politics frame may be related to the high presence of the responsibility frame in both sectors. The responsibility frame deals with whether and how political actions are followed up, making the politics and responsibility frames closely related. Whenever a political measure was mentioned, the majority of the paragraph focused on discussing how responsibility for the measure was taken, and as a result, these news articles were categorised under the label of responsibility instead of politics. As a result, the presence of separate political paragraphs was lower than expected.

Tone of voice towards news frames

The performed media analysis showed that the overall tone of voice towards the different news frames was negative, both in the healthcare and event sectors. Besides the overall tone of voice of the news frames, a closer look was taken into the different news frames individually. For both sectors, this study showed that hope and responsibility were mostly used in combination with a positive tone of voice. Frames about human-interest, morality and politics occurred most neutrally. Conflict, economic consequences, and fear were often used negatively. These findings regarding news frames in combination with tone of voice were mostly in line with the expectations from the literature, except for human-interest. In this study, the human-interest frame showed personal stories; however, these stories were mostly about negative effects that people encountered due to COVID-19, such as losing loved ones or not being able to attend events. This outcome may be explained by the fact that aspects of human-interest, including human needs and mental health, are often about negative aspects because the coronavirus restricted certain human needs and isolated people (Matias et al., 2020).

Stakeholders

In this explorative research study, one of the goals was to find out which stakeholders played a prominent role in the healthcare and event sector. The media articles concerning the healthcare sector showed that the most mentioned stakeholders were the specialists, advisory boards, and customers/clients. The event sector on the other hand mentioned the employees, sector/organisation, and the customer/clients in the most articles. The performed media analysis related to the stakeholders showed some differences between the outcome of the analysis and the pre-set expectations. Sector/organisation, employee, management, sector alliance, government, advisory board, customer/client, society, specialists, and media were expected to be present in the study about the coronavirus in the Netherlands, based on outcome from comparable studies related to a crisis. In both the healthcare and event sector, the stakeholders media and management were less commonly used by the media.

When looking at the different stakeholders in both sectors, it becomes apparent that the most mentioned stakeholders in the healthcare sector are external, and in the event sector are internal. The reason why external stakeholders play a prominent role in the media coverage of the healthcare sector can be explained by the content of these media articles. The most used news frames were responsibility, conflict, and hope. External stakeholders, including specialists and advisory boards, were often quoted to share their expertise or knowledge regarding the coronavirus. These external stakeholders demonstrated their importance and took responsibility with regards to COVID-19, and discussions on policies and measures were also reflected. These stakeholders also demonstrated hope regarding the virus by indicating which measures had an effect on mortality rates. These external stakeholders do not have direct influence on how everything is executed like employees do, but their relationship to the sector played a crucial role in informing readers about important aspects of coronavirus pandemic.

The prominence of internal stakeholders being mentioned in the event sector can be explained by the content of reports on the coronavirus in this sector. The most used frames were human-interest, economic consequences, and responsibility. Reports featured internal stakeholders, including employees and organisations, who shared their experiences with the COVID-19 situation, adapting event organisation responsibly, and advocating for government support, as seen during the Sound of Silence (Sokol, 2020). Internal stakeholders in the event sector have a direct connection to the sector and were impacted by regulations that prohibited events, leading to financial consequences (Event Branche, 2020; Klaassen & Van Mersbergen, 2021).

Stakeholders and tone of voice

In this study, stakeholders were mostly mentioned neutrally, followed by a positive and negative tone of voice. This outcome applied to both the healthcare and event sector. This finding was in line with the literature, which suggests that the majority of stakeholders will be neutrally framed (Nijkraak et al., 2015). A possible reason why the tone of voice towards specialists in the healthcare sector is positive in the media could be that specialists are perceived as experts and reliable sources of medical information (Hoeken, Hornikx, & Hustinx, 2012). According to Hoeken et al. (2012), people tend to develop positive attitudes towards experts and view them as credible sources of information. Newspapers are considered the second most reliable news source, making it important for the media to present reliable and accurate information to the public, for example, through positive portrayal of specialists (Counter Collective, 2020; Hoeken et al., 2012). Additionally, the coronavirus pandemic was a victim-related crisis, meaning that stakeholders did not have a direct attribution of responsibility for the crisis and became victims themselves (Coombs, 2007). This explains why negatively named stakeholders are the least common in media reports on the coronavirus.

Development news frames over time

Another goal of this exploratory research study was to find out how the media used different news frames over time in the healthcare and event sectors. Therefore, no pre-set expectations were formed for this study. A first similarity between the timeframes of the healthcare and event sectors was found around March 2020, the early phase of the corona pandemic in the Netherlands. At that point in the timeline, it could be seen that the various news frames all peaked. A cause for these peaks related to the news frames has to do with when something is considered news. According to Staps (2021), several aspects can determine if something can be considered as news and how prominent it will be covered in the media, such as novelty, unusualness, interestingness, relevance, concreteness, understandability, proximity, being about people, and repetition of expertise. In March 2020, the

coronavirus was first found in the Netherlands, which is considered novel, unusual, and relevant according to Staps (2021).

The second similarity between the healthcare and event sectors in the results is about the low frequency of news frames between May 2020 and August 2020, roughly the summer period. A possible main reason for the lower number of used news frames may be found in the mortality rates and corona measures. The result section shows the mortality rates and corona measures by month, as shown in Tables 6 and 7. In those tables, it can be seen that there is a decrease in the mortality rates, and there were no major corona measures. Therefore, fewer aspects of Staps (2021) are applicable to the events in those months to be considered as news, concerning the coronavirus. Another more general cause that can be mentioned is the Silly Season, a period of the year, usually in the summer, where newspapers do not have important things to report. Since in the summer period, there are fewer major political, economic, and social activities (Lima, Teixeira, & Barbosa, 2022).

Besides the similarities between the healthcare and event sectors regarding the news frames used, several differences were also found. The first difference in the results relates to the news frames in the summer period. Both sectors show a low frequency of applied news frames in media articles; however, there are some exceptions. While the healthcare sector does not show peaks in the usage of news frames in that period, the results showed that peaks of the economic consequences and human-interest frame can be found in the event sector. During this time period, the event sector raised an alarm as it was not feasible or permitted to organise events due to the COVID-19 measures in place. This was in contrast to other sectors, which were allowed to continue their jobs in adapted forms. With actions like the Sound of Silence, the sector wanted to attract attention to show the great economic and human consequences but also to draw attention from politicians in order to get on the political agenda (Sokol, 2020). The media started to publish about those actions since they contained the characteristics mentioned by Staps (2021).

Another explanation for the difference in news frame usage, specifically during the summer period, may be related to the mortality rates. The usage of news frames in the healthcare sector corresponds with mortality rates, as illustrated in figure 1. The usage of news frames in event sector (Figure 2) showed that the mortality rates are not in line with the peaks and troughs of the news frames. When looking at the mortality rates from May 2020 to September 2020, it is evident that these numbers were lower than the rest of the year. This means that fewer people died from coronavirus, which could be attributed to the implemented COVID-19 measures shown in Table 7. Calling attention to economic impacts while mortality rates are rising is morally flawed. In hospitals, staff is working hard for people's health, and hospital staff face moral injury on a daily basis, which hinders health workers in their work (Weber et al., 2023). In those summer months when the virus was not completely gone, and nurses were still hard at work. However, due to the smaller number of coronavirus victims, it was more suitable for the event sector to draw attention to the economic consequences of COVID-19.

Another difference between the healthcare and event sector can be found in the usage of fear frames. The media analysis showed that fear was present throughout the entire timeframe in the healthcare sector, whereas fear in the event sector was visible only at the start of the timeline and became less and less used until it was virtually absent from October 2020. The fact that the event sector was also framed with fear at the start of the timeline has to do with the characteristics mentioned by Staps (2021), whereby after a while other frames and aspects such as economic consequences played a more prominent role. This difference in the usage of the fear frame has to do with the core business of the healthcare and event sector. In the healthcare sector, fear and mortality rates are much more prominent in news coverage due to the sector's core business in healthcare, whereas the event sector's focus is more on entertainment.

Limitations and future research

As with each study, several limitations can be identified that could have reduced the reliability of the outcomes. Firstly, in this current study, the intensity of coding the news frames were based on previous studies, whereby one news frame per paragraph was assigned. For example, take paragraphs discussing political aspects such as the COVID-19 measures. In these paragraphs, the political frame was present, but since the majority of the paragraph was focused on responsibility towards these measures, the political frame was not assigned. As a result, the analysis's conclusions could not be totally accurate or complete. By using this coding method, it is possible that certain news frames will be more frequently found in media reports than what is observed in the coding results, as the most prominent frame from the paragraph is recorded. For follow-up studies, it is recommended to code the news frames in the same way as the stakeholders in this study, by looking at whether the frame is present in the entire article or how often the frame as a whole appears in the article. However, this will also increase the intensity of the coding process. It is important that there is a good balance between having too many and too few codes. Nonetheless, it is most important to maintain consistency throughout the coding process, ensuring that there are no variations in coding from the beginning to the end (Linneberg & Korsgaard, 2019).

A second limitation of the study relates to the dataset. In this study, news articles were collected from the AD, NRC, Telegraaf, and Volkskrant. During the coding of the articles, some overlap was found in the content of the articles published in the four different newspapers. However, no research questions were formulated to investigate the differences between the different newspapers. For future research, it would be interesting to explore the content of the different newspapers related to the coronavirus, given their different origins, backgrounds, and target groups. For instance, the Volkskrant focuses on the highly educated reader and positions itself to the left of the political middle, while the Telegraaf describes itself as a newspaper for 'everyone' and states in its articles of association that it is impartial (De Puttenaer, 2021). Due to these differences in the foci of these newspapers, it might also be the case that they use certain frames more often than others. For example, consider the Volkskrant and the Telegraaf. The Volkskrant is known for delving deeper into investigations and facts, which may result in them using more news frames than the Telegraaf, a newspaper that writes for the common man and also includes gossip. Therefore, the Telegraaf may offer less depth and use fewer and different frames in the same situation (De Puttenaer, 2021).

Implications

The coronavirus pandemic was a unique and new situation that affected everyone. In order to control the mortality rates, many measures were tried with trial and error, as could be found in the media articles. The media analysis showed that the media paid a lot of attention to economic consequences and fear frames. The human-interest frame was not used prominently throughout the timeframe in the healthcare sector and received some more attention in the event sector. One aspect that could fall under human-interest frames is mental health issues. Mental health problems, such as depression and sleep disturbances, increased since the start of the pandemic (Santomauro et al., 2021). These mental health effects are more likely caused by psychosocial factors rather than the effects of the virus itself (Bourmistrova, 2022). When the virus was just discovered, COVID-19 was described by the Cucinotta & Vanelli (2020) as a virus that can cause pneumonia, which can have long-term recovery or can be lethal for some people. No mental health effects were addressed at the start. It took a long time before attention was paid to these mental health problems and the message was communicated in the media (CBS, 2021b). The COVID-19 crisis has highlighted existing mental health issues and caused new ones, prompting the government to take action towards improving mental health (Rijksoverheid, 2022).

In the future, the media should take a leading role in telling the bigger story or creating more awareness for other effects of the crisis, as they are an important stakeholder in informing the public about a crisis. Keeping in mind that the media are independent, neutral, and have freedom of speech (Wetboek van Strafvordering, 2018). However, they could address it in a certain way, for example with disclaimers. Of course, the economic impact and mortality rates should be reported, but other effects should not be forgotten, such as psychosocial factors. After all, the media play a key role in agenda-setting and what is ultimately discussed in politics. By discussing mental health problems during a crisis, Dutch citizens will talk about it, and it will reach politicians as well. This will enable politicians to take mental problems caused by a crisis and the accompanying measures into account.

Conclusion

This study analysed how Dutch newspapers portrayed the healthcare and event sectors in the Netherlands from January 2020 to February 2021, in terms of news frames, stakeholders, and tone of voice. In the healthcare sector, the most common news frames were responsibility, conflict, and hope. In the event sector the most used frames were human-interest, economic consequences, and responsibility. Morality was the least presented frame in both sectors. The generic news frames were commonly used in the study, with the exception of the morality frame. The issue-specific news frames were less common than expected, only the hope frame met the expectations. The overall tone of voice towards the news frames was negative. Hope and responsibility were mostly used with a positive tone of voice, while human-interest, morality and politics were neutral, and conflicts, economic consequences, and fear were negative.

Prominent stakeholders in the healthcare sector included specialists, advisory boards, and customers/clients, while employees, sector/organization, and customers/clients were prominent in the event sector. Media and management had the least presence in both sectors. All stakeholders were mostly mentioned neutrally. News frame usage in both sectors peaked at the beginning of the pandemic. In the healthcare sector, frame usage correlated with COVID-19 mortality rates. Higher mortality rates were associated with an increased frequency of frames, and vice versa. During the summer period, frame usage decreased along with lower mortality rates compared to the rest of the timeframe. In the event sector, news frame usage did not align with mortality rates. While the healthcare sector experienced a calm summer in terms of frame usage, the event sector had some outliers, specifically economic consequences, and human-interest frames. Media may have shifted focus to other topics when mortality rates were decreasing, such as the Sound of Silence. It is morally inappropriate to divert attention from rising mortality rates, but when the numbers decrease, it becomes more acceptable, as observed in the summer period.

This research has shown how the media portrayed the healthcare and event sectors over time during the first year of the COVID-19 pandemic in the Netherlands, in terms of news frames, stakeholders, and tone of voice. In the corona pandemic it was evident that, in addition to mortality rates, economic consequences, and physical complaints caused by COVID-19, psychosocial factors also played an important role. The media have a significant role in informing the public during times of crisis. This way, besides the obvious factors, these points can be brought to the forefront of the public and political agenda. Therefore, the media should act as true agenda setters and take the initiative to include other issues on the agenda, such as psychosocial factors.

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Appendix

Appendix A: Codebook

General information about the news article:

- Sector: Event sector Healthcare sector
- Newspaper: AD NRC Telegraaf Volkskrant
- Date (YYYY, MM,): _____
- Article number: _____

The following news frame(s) are present in the read paragraph:

News frame	Negative	Neutral	Positive	N/A
Conflict	-	0	+	X
Economic consequences	-	0	+	X
Human-interest	-	0	+	X
Morality	-	0	+	X
Responsibility	-	0	+	X
Fear	-	0	+	X
Hope	-	0	+	X
Politics	-	0	+	X

The following stakeholder(s) are present in the read article:

Stakeholder	Negative	Neutral	Positive	N/A
Advisory boards	-	0	+	X
Customer/clients	-	0	+	X
Employees	-	0	+	X
Government	-	0	+	X
Management	-	0	+	X
Media	-	0	+	X
Sector alliances	-	0	+	X
Sector/organisation	-	0	+	X
Society	-	0	+	X
Specialists	-	0	+	X

Note: on the following pages of this codebook you can find the definitions with some examples regarding the news frames and stakeholders.

News frames with definitions and examples.

News frame	Definition	Example of the frame
Conflict	Emphasizing conflict between individuals, groups, or institutions as means of capturing audience interest.	De hoogleraar noemt de uitspraken van De Jonge dan ook onverstandig. Girbes: De minister zou zich niet moeten uitlaten over zaken waar hij geen verstand van heeft.
Economic consequences	Reporting an event, problem, or issue in terms of the consequences it will have economically on an individual, group, institution, region, or country.	Het instituut schat dat zo'n 16.000 mensen gebruik zullen maken van de regeling als die wordt uitgevoerd. Dat zal zo'n 27,7 miljoen euro kosten voor het jaar vanaf maart 2020.
Human-interest	Bringing a human face or an emotional angle to the presentation of an event, issue, or problem.	Een beetje wat zanger René Froger aan het begin van corona ook al uitkraamde: iedereen is zwaar getroffen, maar de artiesten toch wel een beetje meer dan de rest.
Morality	Putting the event, problem, or issue in the context of religious tenets or moral prescriptions.	De eerste vraag die op tafel kwam is: wil je als organisatie moreel gezien verantwoordelijk zijn voor de verspreiding van het virus?
Responsibility	Presenting an issue or problem in such a way as to attribute responsibility for its cause or solution to either the government or to an individual or group.	Het niet gebruiken van voldoende beschermingsmiddelen tegen corona speelt mogelijk een rol bij de snelle verspreiding van het gevaarlijke virus in een Rotterdam
Fear	Emphasizing the fatal risks of infectious diseases without seeking to reassure the public.	Nederland moet zich schrap zetten voor het bijna onvermijdelijke moment dat het coronavirus in onze samenleving opduikt. Nu het aantal besmettingen in het noorden van Italië rap toeneemt, dendert COVID-19 steeds sneller op ons land af.
Hope	Emphasizing hope or comfort among the public to reduce the dark and uncertainty regarding the crisis.	Volgens de Rotterdamse woordvoerder Ingrid Adriaanse zijn er nog geen besluiten genomen. "We volgen de ontwikkelingen natuurlijk wel op de voet." Als alles doorgaat, vinden de halve finales van het Eurovisie Songfestival op 12 en 14 mei plaat in Ahoy en de grote finale op 16 mei.
Politics	Adding political messages which highlights (inter) national relationships and other stakeholders in a political perspective.	Het kabinet heeft strikte richtlijnen uitgevaardigd in een ultieme poging om het dodelijke coronavirus onder de duim te houden. Deze maatregelen moeten ervoor zorgen dat het virus niet verder wordt verspreid. Daarom gaat een streep door evenementen waar veel mensen bijeenkomen.

Stakeholders with definitions and examples.

Stakeholder	Definition	Examples health care sector	Examples event sector
Advisory boards	Refers to any advisory board of the government.	RIVM OMT	Raad van commissarissen UWV
Customer/clients	Refers to anyone who makes use of the products and services of the companies in the sectors.	Patiënt Cliënt	2800 deelnemers Het publiek
Employees	Refers to any person that is working in the concerned sector.	Mijn huisarts Extra medewerkers	Exploitanten Personeel
Government	Refers to the Dutch government, minister or other political parties.	Tweede Kamer Zorgminister Bruins	Burgermeesters Mark Rutte
Management	Refers to the management or a person of the management of a company.	Ziekenhuiswoordvoerder Vicevoorzitter	Algemeen directeur Eigenaar Weflycheap.nl
Media	Refers to the any type of media, this can be online or offline.	Op1 NOS	De Telegraaf Financial Times
Sector alliances	Refers to any sector alliance of the concerned sector.	V&VN NVIC	KNVB BOVAK
Sector/organisation	Refers to the entire sector or an organisation/business in general.	GGD Ziekenhuizen	Sportwereld Evenementen
Society	Refers to Dutch society as a whole or a part of it.	Nederland Nederlanders	Nederland De bevolking
Specialists	Refers to a person/organisation who has knowledge about the matter.	Viroloog Marc van Ranst Longarts In 't Veen	Gommers GGD

Tone of voice	Definition	Example
Negative (-)		
Conflict	The mentioned conflict has a negative tone, or whereby the conflicts get a negative twist.	De indruk heb ik niet van onze autoriteiten. Minister Bruno Bruins van Medische Zorg & Sport lijkt de druk niet aan te kunnen en verder zitten er in het kabinet en in het parlement nauwelijks wetenschappers van het formaat Ronald Plasterk.
Economic consequences	The mentioned economic consequences are negative.	Het zijn heel zware tijden voor cateraars en tentenbouwers. De evenementen zijn door de coronacrisis tot 1 september compleet weggevallen. En daarmee hun inkomsten.
Human-interest	The mentioned human-interest has a negative tone, or whereby the conflicts get a negative twist.	“Heel pijnlijk dat het niet doorgaat”, zet de 33-jarige Choukoud. “Vooral omdat ik ervan overtuigd ben dat ik aan de limiet kan voldoen. Ik ben nog nooit zo goed in vorm geweest.”
Morality	The mentioned morality has a negative tone or negative twist.	Personeel komt volgens de inspectie voor ‘lastige keuzes’ te staan. Zeker ook omdat niet iedereen wordt getest op het virus, ook cliënten niet.
Responsibility	No responsibility towards the issue is taken.	Het blijft verbazen dat het kabinet pas nú deze ingrepen doet. Andere landen hebben veel eerder maatregelen genomen.
Fear	The emphasised fear increases.	In Nederland is nu van in totaal 382 mensen bekend dat zij het coronavirus hebben. Vier van hen zijn eraan overleden.
Hope	The emphasised hope or comfort among the public decreases.	Deskundigen waarschuwen wel dat het nog te vroeg is om over versoepeling van de maatregelen te spreken.
Politics	The political messages show a negative political perspective.	Ook politici vragen zich af waarom er zo weinig informatie wordt gegeven. Zo vraagt CDA'er Pieter Omzigt zal al dagen af of ons land wel voldoende voorzorgsmaatregelen neemt.
Tone of voice	Definition	Example
Neutral (0)	The mentioned news frame cannot be framed as positive or negative in the coded paragraph.	N/A

Below you can find how tone of voice towards frames can be seen in articles.

Tone of voice	Definition	Example
Positive (+)		
Conflict	The mentioned conflict has a positive tone, or whereby the conflicts get a positive twist.	Er lijkt een oplossing gevonden te zijn voor de getroffen ondernemingen. Het kabinet komt met extra financiële maatregelen voor deze bedrijven, zo melden bronnen.
Economic consequences	The mentioned economic consequences are positive.	Misgelopen omzet en extra kosten zijn voor het grootste deel gedekt.
Human-interest	The mentioned human-interest has a positive tone, or whereby the conflicts get a positive twist.	Noorderlingen zijn nogal nuchter en bescheiden. Opeens was er het besef: potjandikkie, hier staat wel iets heel bijzonders. Als wij de Formule 1 hadden gekregen, dan was dat uniek geweest.
Morality	The mentioned morality has a positive tone or positive twist.	The UEFA toont inmiddels begrip voor het niet voltooiën van competities.
Responsibility	Responsibility towards the issue is taken.	Bij een beetje wedstrijd reiken vrijwilligers op de route water of sportdrank uit. Maar ook dat vormt een risico dat Vandevelde wil mijden.
Fear	The emphasised fear decreases.	Het aantal besmettingen is het afgelopen etmaal sterk afgenomen.
Hope	The emphasised hope or comfort among the public increases.	Depla benadrukt dat hij begrijpt dat de KNVB zich voorbereidt op een herstart van de competitie per half juni.
Politics	The political messages show a positive political perspective.	Dinsdag presenteert het kabinet waarschijnlijk een nieuw steunpakket met aanvullende maatregelen, melden bronnen rond het kabinet. Hoekstra zei vorige week al dat de overheid geld genoeg heeft, mocht het nodig zijn.

Below you can find how tone of voice toward stakeholders can be seen in articles.

Tone of voice	Definition	Example of the used tone of voice
Negative (-)	Shows unfavourable tone to the stakeholder, wherein for example anger, unhappiness, blame, or scepticism can be found.	Het botst met alles waar de liberaal Mark Rutte normaal gesproken voor staat.
Neutral (0)	The tone cannot be placed into one of these categories.	Burgemeesters achten kans klein dat Eredivisie wordt afgemaakt.
Positive (+)	Favourable tone or communication that shows support towards the stakeholder and the made actions.	Hoekstra betoont zich even niet langer een zuinige Europeaan.