

Analyzing The New York Times Editorials on Social Distancing During the COVID-19 Pandemic

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Abstract: The COVID-19 pandemic has profoundly affected our society, and the media has played a crucial role in shaping the public's understanding of the crisis. As a social institution, the media constructs and disseminates information about the pandemic, providing interpretations of the complexities of reality such as social distancing. To examine how media construct stories about social distancing during the pandemic, this study analyzed The New York Times editorial articles published during the COVID-19 pandemic. Utilizing word-association network analysis and cluster analysis based on Convergence of Iterated Correlations analysis, this study examined 653 editorials published in The New York Times regarding social distancing in the period spanning January 27, 2020, to January 4, 2023. The word-association network analysis revealed that the most salient keywords in the editorials were “COVID”, “People”, and “Virus.” Cluster analysis identified four major discussions constructed in the text: "The Impact of Science and Politics on Public Benefit," "Challenges of the COVID-19 Pandemic," "Government Responses to Combat the Spread of the COVID-19," and "Impact of the COVID-19 on Daily Lives in New York." The findings indicated that the most frequently employed keywords revolved around the pandemic and the associated governmental responses. Furthermore, the media narratives concerning social distancing were predominantly framed around the salience of government interventions, scientific strategies, and the role of social distancing.

Keywords: Cluster Analysis, Convergence of Iterated Correlations, COVID-19, Editorials, Media, Media Framing, New York Times, Social Distancing, Text Mining

1. Introduction

In January 2020, the first case of COVID-19 was reported in the United States, and the virus has since spread nationwide[1]. The World Health Organization declared COVID-19 a pandemic on March 11, 2020. In response to outbreaks in Washington State and New York, governors in those states imposed restrictions on large gatherings, closed schools, and non-essential businesses. Shortly thereafter, the U.S. President's Coronavirus Guidance for America was announced, with the aim of slowing the spread of the virus by limiting gatherings and travel[2]. Social distancing, defined by the Center for Disease Control as a public health practice to prevent transmission of disease by limiting close contact between sick and healthy individuals, has been recommended by health officials in both the U.S. and Canada[3]. In March 2020, most states in the U.S. reported community spread of COVID-19 and issued "stay-at-

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home" orders to slow the spread. Transit agencies have implemented measures to comply with social distancing guidelines, but maintaining physical distances on public transportation poses many challenges[4]. Although the social distancing policy has been eased over the past years, the current Center for Disease Control guidelines still recommend that people practice social distancing by putting space among themselves if not fully vaccinated or at higher risk for severe illness from COVID-19.

Social distancing is a crucial public health measure aimed at reducing interactions between individuals in a community where some are infected but not yet identified and isolated[5]. Meanwhile, the concept of social distancing encompasses not only the relationships and groups within society but also various forms of differences, including social class, race, ethnicity, sexuality, physical ability, and proximity[6]. Thus, social distancing is not only a practical intervention in public health but also a multifaceted concept that addresses various forms of social disparities. Understanding the COVID-19 pandemic hinges on grasping the significance of "social distancing" as a primary strategy to curb virus transmission, resulting in profound changes to our lives by reducing person-to-person contact. Given the consequential implications for social interaction and order, it becomes imperative to explore how the concept of "social distancing" is conveyed to the public and shapes their perception. While existing research primarily focuses on the impact and challenges of social distancing, there is limited investigation into how the media constructs narratives surrounding it. Moreover, there is a notable absence of studies utilizing quantitative text-mining techniques to examine how U.S. media depicts social distancing. This study aims to bridge this gap by employing text-mining techniques to analyze how media frames stories related to social distancing.

The media is a significant social institution that plays a vital role in shaping our understanding of reality. The media provides us with stories and information about society, and in the process, constructs specific interpretations of reality. When it comes to social distancing, media coverage plays a crucial role in constructing social realities by highlighting its complexities and nuances. The analysis of media's construction of narratives surrounding social distancing offers invaluable perspectives into how the media molds our societal understanding and perception of reality. This study focuses on exploring how The New York Times editorials depict social distancing and its social implications under the COVID-19. Thus, the main research questions of this study are as follows:

RQ1: What are the most frequent terms that The New York Times editorials used in depicting social distancing during the COVID-19 pandemic?

RQ2: What are the major narratives or frames The New York Times editorials used in depicting social distancing during the COVID-19 pandemic?

The New York Times, a highly esteemed newspaper known for its impactful role in molding public opinion, was chosen as the data source for this research. Its comprehensive coverage of the pandemic further underscores its relevance to this study. Founded in 1851 as a daily paper, The New York Times has burgeoned into a globally acclaimed publication, enjoying a vast readership and considerable influence. It stands as the 18th most circulated newspaper globally and ranks 3rd in the U.S., boasting an average readership of 4.3 million[7]. Its collection of over 130 Pulitzer Prizes manifested the outstanding quality of journalism offered by The New York Times. This impressive track record underscores the paper's credibility and the weight its content carries, making it an apt choice for the data collection in this research. By examining the stories and realities presented by The New York Times editorials concerning social distancing, this study aims to uncover the underlying shape of stories implied in the media under COVID-19. Social distancing has changed the way people interact and forced everyone to adapt to new norms. The media's depiction of social distancing has a significant impact on the way people perceive these new norms and their social implications. Therefore, analyzing the media's portrayal of social distancing is crucial to understanding the social impact of COVID-19 and the role of

media in shaping social realities.

2. Literature Review and Theoretical Background

Several existing studies[8][9] have explored the media's role in shaping public understanding of social distancing as a health strategy amid the COVID-19 pandemic. For instance, Pedersen and Favero[8] suggested that media exposure significantly influences how individuals cope with social distancing. Eden et al.[9] further investigated the links between specific forms of media usage and psychological well-being concepts. These studies, however, primarily focused on the general relationships between media usage and social distancing, without examining the specifics of media content. This leaves a gap in understanding how individual media messages specifically sway people's perception and behavior. To address this, some researchers have attempted to analyze media messages related to COVID-19. Boon-Itt and Skunkan[10], for example, analyzed Twitter messages surrounding the pandemic. The authors found three main aspects of public awareness and concern regarding the COVID-19 pandemic. They concluded that Twitter is a good communication channel for understanding both public concern and public awareness about the COVID-19 pandemic. However, their analysis covered general media messages around COVID-19, without a specific focus on social distancing.

Other studies took a more targeted approach, focusing on social distancing-related media messages. Saleh and colleagues[11] employed natural language processing and machine-learning models to analyze tweets, with sentiment analysis to identify emotions and polarity. They concluded that Twitter users generally expressed support for social distancing in the early stages of implementation. Meanwhile, Putra[12] examined the discourse on a video titled "social distancing" from Indonesian President Joko Widodo's YouTube channel. The study revealed a tendency, among Indonesians, to support English language use in social practice demonstrated by the English terms in the video. Nerlich and Jaspal[13] analyzed the emergence of "social distancing" discourse in *The Times* and *The Sun*, two UK newspapers with the widest circulation. They found that social distancing struggled to emerge due to government obfuscation. While these studies have provided valuable insights into how the media frames "Social Distancing," a comprehensive depiction of this media portrayal remains lacking. This research fills that gap by focusing solely on the narratives of "social distancing" within *The New York Times* editorials. By examining the underlying frames within these narratives, this study offers a unique contribution to our understanding of the role of media framing in shaping public perception and behavior concerning "social distancing" during the COVID-19 pandemic.

The concept of media framing is a key focus of communication studies, with a dynamic research program exploring the topic including media coverage of the health crisis[14]. D'Angelo[15] defines media framing as the process by which a communicator contextualizes a topic, such as a person, event, episode, or issue, within a text that is then transmitted to receivers through various forms of mediation. The term "communicator" refers to individuals or groups within a formal organization, such as a news staff or advocacy group, while "receiver" includes individual people, formal groups, or informal groups of people, including audience members or constituents. With media frames being ubiquitous in modern communication, studying them is critical to understanding how different messages are conveyed and interpreted in today's society.

Framing is a powerful communication tool that enables the media to connect with the masses by telling a compelling story, as seen in the case of social distancing. The way the media approaches this issue and the dominant frames that shape the media's construction of social realities is crucial. Analyzing the frames used in reporting on social distancing provides insight into how the media shapes public perceptions of this practice and the social implications of their coverage. Therefore, framing plays a critical role in shaping media narratives on social distancing, enabling us to assess how the media constructs and disseminates social realities on this important issue.

To investigate media framing, scholars often use methods such as semantic association analysis, network analysis, and text mining. For example, Jeon and Lee[16] analyzed media coverage of contagious diseases using a corpus analysis, which revealed that most headlines used negative sentiment. Jin[17] used network analysis to study semantic associations in news reporting on the Middle East Respiratory Syndrome outbreak in 2015, finding differences in coverage by Korean and foreign news sources. In this study, text mining was employed to explore how New York Times editorials constructed stories concerning social distancing. Text mining involves various approaches, such as machine learning, data mining, and statistical linguistics, to discover patterns and relationships in unstructured data. By examining word usage in unstructured data, text mining provides an effective approach for uncovering patterns and relationships that exist within the data[18].

3. Methods

3.1 Research Design

Figure 1 shows the research protocol used for this study. It consisted of five stages namely Planning, Searching, Filtering, Analysis, and Synthesis.



[Fig. 1] Research Design

In the Planning stage, the central research question was established, and textual analysis as the research methodology was decided. The Searching stage involved the collection of editorials from The New York Times published during the pandemic, using relevant keywords. During the Filtering stage, articles not focused on social distancing were excluded to ensure relevance to the study. To ensure a comprehensive representation of “social distancing” in relation to the COVID-19 pandemic within the selected articles, the research team meticulously scrutinized each article. Any article where the term “social distancing” was merely utilized for the titling of images, announcements, or advertisements, and was not integral to the core content of the article, was judiciously excluded from the study. The Analysis stage encompassed conducting textual analysis using network analysis and cluster analysis. In the Synthesis stage, the study's findings were consolidated, and conclusions were drawn, highlighting the narratives of The New York Times’ editorial concerning “social distancing” during the COVID-19 pandemic.

3.2 Data Set

To scrutinize how media framed the concept of social distancing during the COVID-19 pandemic, editorials published in The New York Times were selected as the primary source. The process of data collection was carried out through The New York Times homepage[19], using its search function.

Initially, the research team restricted the search parameters to the editorial section. Subsequently, two search terms, 'Social Distance' and 'Social Distancing,' were employed. Following a rigorous

examination to guarantee a comprehensive representation of social distancing within the articles, the pertinent content was then transferred to a text file. Any extraneous material, such as advertisements and announcements, was manually excised during this process. The time frame used to select the published pieces spanned from January 27, 2020, to January 4, 2023, encapsulating the prime phase of the pandemic. As a result of selection process, a collection of 653 editorials was amassed, totaling 1,818,617 words, providing a comprehensive body of text for analysis.

The corpus was refined for analysis through several preprocessing steps. These included removing stop words, extracting irrelevant articles, and lemmatizing words to their base or root form. During preprocessing, the terms “social distancing” and “social distance” were both reduced to “social distance” to ensure they were counted as a single concept. As a result, the final corpus consisted of 932,767 words, representing a focused dataset for examining social distancing discourse in the selected editorials.

3.3 Data Analysis

In analyzing the data, Textom and UCINET 6.0 were used. Textom is a software developed by the IMC company in 2013. It is designed to refine and analyze large amounts of everyday language generated from mass communication channels such as internet portals and social media[20]. This program enables researchers to identify and rank the frequency of keywords related to the topic of interest. These refined and extracted keywords are then frequency-matrixed, which is a valuable resource for network analysis between keywords. The network was constructed using the UCINET program. It is a software package for the analysis of social network data. It was developed by Lin Freeman, Martin Everett, and Steve Borgatti and is distributed by Analytic Technologies[21]. The program includes a range of social network analysis methods, such as centrality measures, and subgroup identification. It comes with netDraw, a network visualization tool.



[Fig. 2] Big Data Analysis Process

[Fig. 2] illustrates the procedure for analyzing big data. The data collected required data preparation or manipulation. The New York Times articles that were converted into text files underwent a data preprocessing module in Textom. During this process, meaningless words, such as articles and “be” verbs, were removed using the stop-word dictionary built into the program. The refined data subsequently facilitated the creation of a text corpus within the text mining module, which in turn enabled the generation of a Document-Term Matrix (DTM) within the matrix module. A Document-Term Matrix is a mathematical matrix that describes the frequency of terms that occur in a collection of documents. In a Document-Term Matrix, rows correspond to documents in the collection and columns correspond to terms[22]. Employing the network function in UCINET 6.0, the Document-Term Matrix underwent semantic network analysis, examining the degree centrality, closeness centrality, and betweenness centrality of the keywords. Increased connectivity between keywords suggests enhanced influence among them. Network visualization was accomplished using NetDraw, an integrated component of the UCINET 6.0.

Centrality is a measure of importance for nodes in a network node. It is used to evaluate the influence

of a node over other nodes in the network[23]. The “degree centrality” is a measure of how many direct connections a node has to other nodes in the network. It is the simplest measure of node connectivity and assigns an importance score based simply on the number of links held by each. The “closeness centrality” of a node in a connected graph is calculated by taking the average of the shortest distances between that node and all other nodes in the graph. It is normalized by multiplying it by $N-1$, where N is the number of nodes in the graph as shown in the following formula where $d(u,v)$ denotes the distance between the nodes u and v . The more central a node is, the shorter its average distance to all other nodes.

$$C_C(v) = \frac{N-1}{\sum_u d(u,v)} \quad (1)$$

The “betweenness centrality” quantifies the number of times a node acts as a bridge along the shortest path between two other nodes. It was introduced as a measure for quantifying the control of a node on the connection between other nodes in a network. The following formula denotes how to compute the betweenness centrality of a node, where the shortest paths between nodes s and t are represented by σ_{st} , and the number of those paths that pass through node v is represented by $\sigma_{st}(v)$.

$$C_B(v) = \sum_{s \neq v \neq t \in v} \frac{\sigma_{st}(v)}{\sigma_{st}} \quad (2)$$

To examine how the keywords clustered in the network, a Convergence of iterated Correlations analysis (CONCOR) was performed. The Convergence of iterated Correlation is a well-established technique for finding groups of nodes that are similar in their patterns of ties to all other nodes[24]. The fundamental concept involves repeatedly applying a correlation matrix that can be rearranged into a blocked structure. The formula for the correlation matrix is shown in the formula below, where Σ_{ij} is the covariance between the variables i and j , and Σ_{ii} and Σ_{jj} are the variances of the variables i and j .

$$\rho_{ij} = \frac{\Sigma_{ij}}{\sqrt{\Sigma_{ii}\Sigma_{jj}}} \quad (3)$$

4. Results

4.1 Keywords and Frequencies

In this study, 200 words with high frequency were initially selected from the collected data. Subsequently, semantically unnecessary words, such as modal verbs, meaningless modifiers, and irrelevant words, were extracted and deleted. Following this refinement process, 50 core keywords were selected, prioritizing those with high semantic value. As indicated in [Table 1], the term “COVID (11674)” emerged as the most frequent term in the frequency analysis, followed by “People (6864),” “Virus (6430),” “Vaccine (4540),” “Pandemic (4376),” “Trump (3724),” “American (3608),” “Work (3420),” “Question (2478),” and “Test (2332).” The frequency of the 50 core keywords indicates that the overall discussion focused on government measures to combat the spread of the disease.

4.2 Centrality Analysis and Network Visualization

The centrality analysis was conducted based on the degree centrality metric. Notably, keywords with high centrality were found to be highly frequent in the text data, particularly “Virus”, “COVID”, and “People”. Moreover, these keywords exhibited high “degree centrality” values, implying that they are

closely connected to other keywords within the network.

It was observed that the keywords “COVID”, “People”, “Vaccine”, “Pandemic”, “American”, “Test”, “Death”, “Expert”, “Danger”, “Reason”, and others exhibit high betweenness centrality. The high values of betweenness centrality among these keywords suggest that these keywords played a crucial role as intermediaries in connecting different nodes in the network.

The closeness centrality values exhibited comparability across 49 keywords, with the notable exception of “Reinfection.” The decreased value associated with 'Reinfection' suggests its role as an independent concept within the network.

[Table 1] Main Keyword Frequency and Centrality

R	Keyword	F	D	C	B	R	Keyword	F	D	C	B
1	Covid	11674	717.96	0.66	0.007	26	Home	1804	175.939	0.651	0.005
2	people	6864	658.323	0.66	0.007	27	Death	1754	131.051	0.66	0.007
3	virus	6430	728.869	0.651	0.005	28	Know	1736	346	0.651	0.005
4	vaccine	4540	244.889	0.66	0.007	29	Expert	1648	103.96	0.66	0.007
5	pandemic	4376	252.444	0.66	0.007	30	End	1612	117.253	0.651	0.005
6	Trump	3724	187.859	0.651	0.005	31	Care	1602	99.333	0.651	0.005
7	American	3608	218.869	0.66	0.007	32	Country	1566	131.697	0.651	0.005
8	work	3420	174.444	0.651	0.005	33	NewYork	1504	115.556	0.651	0.005
9	question	2478	289.03	0.651	0.006	34	Different	1492	197.152	0.651	0.005
10	test	2332	209.131	0.66	0.007	35	Month	1464	80.566	0.651	0.005
11	mask	2262	91.172	0.651	0.005	36	Public	1460	69.859	0.651	0.005
12	continue	2258	311.737	0.651	0.005	37	Change	1434	189.232	0.651	0.005
13	need	2238	192.323	0.651	0.005	38	Level	1420	85.414	0.651	0.005
14	study	2184	313.333	0.651	0.005	39	Support	1406	93.778	0.651	0.006
15	state	2146	130.97	0.651	0.005	40	Sense	1400	109.98	0.651	0.005
16	health	2146	151.515	0.651	0.005	41	Group	1388	178.364	0.651	0.005
17	President	2034	114.485	0.651	0.005	42	Benefit	1368	88.162	0.651	0.006
18	school	1996	68.424	0.651	0.005	43	Government	1368	66.162	0.651	0.005
19	danger	1990	254.707	0.66	0.007	44	Right	1354	179.677	0.651	0.005
20	David	1946	214.97	0.627	0.005	45	Life	1338	62.687	0.651	0.005
21	children	1942	114.586	0.651	0.005	46	Crisis	1332	81.475	0.651	0.005
22	case	1926	143.152	0.651	0.005	47	Science	1322	173.051	0.651	0.005
23	Socialdistance	1858	73.535	0.651	0.005	48	Effective	1306	184.606	0.651	0.005
24	live	1846	165.657	0.651	0.005	49	Available	1296	190.444	0.651	0.005
25	reinfection	1820	128.646	0.446	0	50	Reason	1274	175.838	0.66	0.007

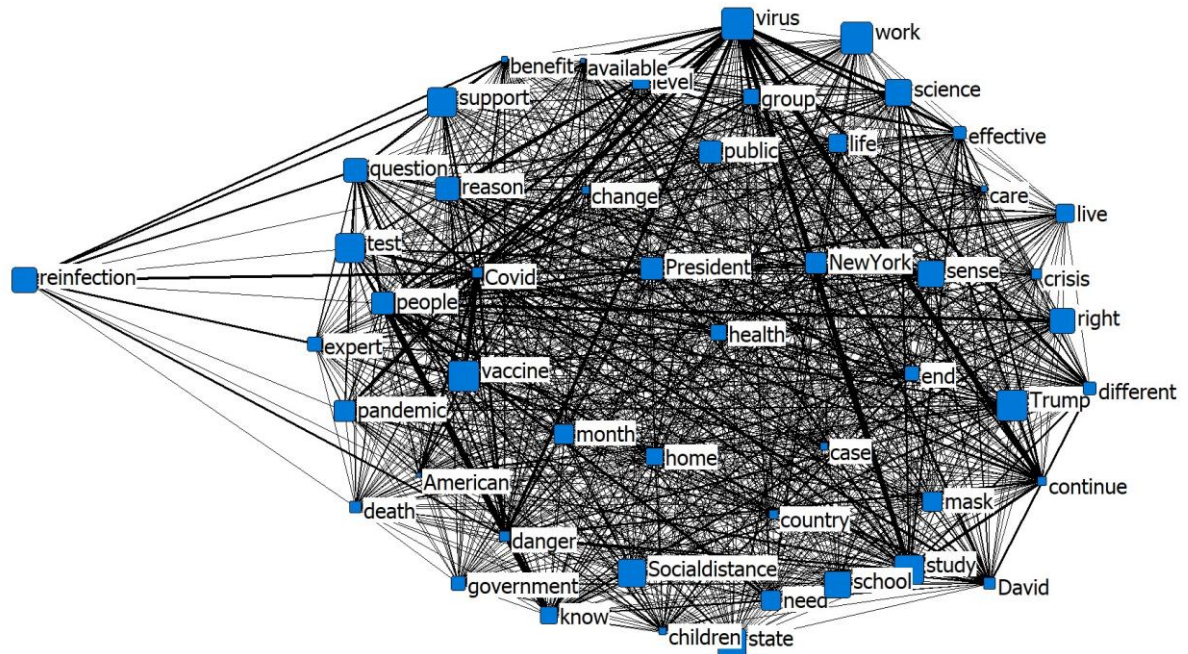
R=Ranking, F=Frequency, D = Degree centrality, C= Closeness centrality, B = betweenness centrality

Figure 3 presents the connectivity, proximity, and number of mediating roles between keyword nodes, where the size of the node indicated the depth of the connection. Nodes with many connecting lines were highly relevant to other keyword nodes. However, the visualization in Figure 2 showed too many connections between nodes, making it visually challenging to understand the detailed relevance of each keyword node. To address this issue, a Convergence of iterated Correlations clustering analysis was performed, which visually grouped nodes with high correlation between keyword nodes.

4.3 Cluster Analysis

A Convergence of Iterated Correlations analysis yielded four groups of keywords. Group 0, composed of 15 keywords including “Trump,” “available,” and “science,” suggests a discussion on the role of science and political action in promoting public welfare during the pandemic, as observed in editorial articles that highlighted social distancing measures. Group 1, with 13 keywords including “Change,” “Crisis,” and “Social Distance,” points to discussions on the challenges posed by the pandemic and the significance of social distancing as a response. Group 2, with 12 keywords including "Expert," “Government,” and “Virus,” reflects a discourse about the effective collaboration and response of governments and experts to contain the spread of the virus. Lastly, Group 3, with 10 keywords including

“Covid,” “New York,” and “American,” highlights discussions on the impact of the pandemic on the daily lives of American citizens, using New York City as an exemplar. The identification and analysis of these keyword groups provide valuable insights into the perceptions and priorities of different groups and individuals regarding the COVID-19 pandemic.



[Fig. 3] Keyword Network

[Table 2] Narrative Clusters

Cluster	Cluster theme	Keywords
0	The Impact of Science and Politics on Public Benefit	Trump, available, benefit, death, end, home, know, level, live, mask, people, public, science, reason, president
1	Challenges of the COVID-19 Pandemic	Change, children, country, crisis, danger, question, reinfection, school, state, test, vaccine, social distance, care
2	Government Responses to Combat the Spread of the COVID-19	Expert, government, group, right, sense, study, support, virus, work, case, continue, effective
3	Impact of the COVID-19 Pandemic on Daily Lives in New York	Covid, David, New York, different, health, life, month, need, pandemic, American

5. Discussions

The findings of this study revealed several significant insights. The word frequency implied that the overall discussion focused on government measures to combat the spread of the disease. These findings are consistent with previous research that showed media framing of the COVID-19 pandemic is focused on the “health crisis”[25]. The centrality analysis results revealed that keywords with high centrality were highly frequent in the text data, particularly “Virus,” “COVID,” and “People.” These keywords exhibited high “degree centrality” values, indicating that they are closely connected to other keywords within the network. Betweenness centrality analysis further suggested that these keywords played a

crucial role as intermediaries in connecting different nodes in the network. The elevated values of “degree centrality” and “betweenness centrality” pertaining to “Virus,” “COVID,” and “People” suggest that the central focus of The New York Times editorials was predominantly on the disease itself, its ramifications on the population, and the strategies employed to counteract it. Closeness centrality analysis showed that most of the keywords exhibited a comparable level of closeness, indicating that these keywords are similarly interrelated. However, “Reinfection” was found to be a relatively independent concept, suggesting that it is less closely connected to other keywords in the network. The diminished “closeness centrality” value for “Reinfection” suggests that the subject of reinfection received less emphasis in The New York Times' editorials. These findings are consistent with previous studies that found media coverage of the COVID-19 pandemic has been predominantly focused on disease-related issues and the framing lacks sufficient self-efficacy[26].

The cluster analysis based on the relationships between keywords used in the editorials revealed the four distinct frames that the editorials used to construct stories related to “Social Distancing.” The first group, Group 0, included keywords such as “Trump,” “available,” and “science,” which suggests that editorial articles highlighted social distancing measures in relation to political action and the role of science in promoting public welfare during the pandemic. This finding is not surprising, as previous research has shown that the media plays an important role in shaping public perceptions of political and scientific issues[27]. The second group, Group 1, included keywords such as “Change,” “Crisis,” and “Social Distance,” which indicates that editorial discussions focused on the challenges posed by the pandemic and the importance of social distancing as a response. This finding is consistent with previous research on the media's coverage of pandemics, which has shown that social distancing measures are often presented as a key response to controlling the spread of the virus[13]. The third group, Group 2, included keywords such as “Expert,” “Government,” and “Virus,” which suggests that editorial discussions focused on the collaboration and response of governments and experts in containing the spread of the virus. This finding is consistent with previous research on the media's coverage of public health emergencies, which has shown that the media often frames responses to such crises regarding the role of government and experts[28]. The fourth and final group, Group 3, included keywords such as “Covid,” “New York,” and “American,” which highlights editorial discussions on the impact of the pandemic on the daily lives of American citizens, using New York City as an exemplar. This finding is also consistent with previous research on the media's coverage of public health emergencies, which has shown that the media often focuses on the impact of the crisis on the public, particularly regarding its effects on daily life[29].

Overall, the results of this study provide valuable insights into how the New York Times editorials framed “social distancing” during the COVID-19 pandemic. These findings have implications for how the media shape public perceptions of pandemics and the response to such crises. For instance, the focus on the role of science and political action in promoting public welfare highlights the importance of effective communication between scientific experts and political leaders in times of crisis. Additionally, the focus on the challenges posed by the pandemic and the significance of social distancing underscores the need for continued public education and awareness of best practices for responding to pandemics. Finally, the emphasis on the impact of the pandemic on the daily lives of American citizens highlights the need for a more human-centric approach to pandemic response, which takes into account the social, economic, and psychological effects of the crisis on individuals and communities.

Despite the insightful findings, certain contextual boundaries should be noted to fully appreciate the scope of this study. Firstly, the exclusive analysis of editorials published in The New York Times was a strategic decision to focus on a single, highly influential source of information, rather than a limitation that excludes other forms of media or news outlets. Consequently, the study provides a focused examination, although the findings are not directly applicable to other news sources.

Secondly, the study's emphasis on keyword usage in the editorials over detailed content or tonal

analysis facilitates an objective, quantifiable approach to data collection. While this method does capture certain nuances in the framing of social distancing, it provides a clear, measurable indicator of the frequency and centrality of key themes.

Thirdly, while the centrality analysis and Convergence of Iterated Correlations clustering analysis are subject to some limitations, such as susceptibility to dataset size and keyword selection, these methodologies are widely accepted within the field for their efficacy in discerning relationships among words and clusters of keywords.

Finally, the study's focus on a specific media source within a particular region is an intentional choice that enables an in-depth understanding of that context. Although the results are not universally applicable to different regions with distinct social and cultural environments, they offer valuable insights into the media framing of social distancing within the studied context.

6. Conclusion

The objective of this research was to understand the framing of "social distancing" in media narratives during the COVID-19 pandemic, specifically within the editorials of the New York Times.

Several important findings emerged from this study. The most frequently used keywords were centered around the pandemic and governmental responses, suggesting the discourse was primarily focused on these aspects. Further, the analysis identified four distinct thematic frames within the narratives: the role of science and political action, the challenges posed by the pandemic and the significance of social distancing, the collaborative responses of governments and experts, and the impact of the pandemic on the daily lives of American citizens, especially within New York City.

These findings hold several implications. The prominence of government measures, scientific interventions, and the role of social distancing in the discourse suggests a strong media focus on these aspects. This, in turn, influences public perceptions and behaviors regarding pandemic response, emphasizing the need for effective communication between experts and the public. The framing of the challenges posed by the pandemic and the importance of social distancing underscores the media's role in public education about best practices during health crises. Additionally, the focus on the effects of the pandemic on daily life suggests the necessity for a more holistic, human-centric approach to crisis reporting and response, which considers the socio-economic and psychological impacts on individuals and communities.

Regarding generalization, it is critical to note that this study's focus on the New York Times' editorials does not represent all media narratives surrounding the pandemic. However, the uncovered themes provide a valuable snapshot of one influential media outlet's framing of "social distancing," and can potentially be observed in other outlets.

Moving forward, these insights open up several avenues for future research. Other media outlets, as well as different types of articles beyond editorials, should be explored to gain a more comprehensive understanding of media framing during pandemics. Further investigation into the interplay of public opinion and media narratives could also provide important insights into how public perceptions are shaped during health crises.

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References

- [1] M. L. Holshue, C. DeBolt, S. Lindquist, K. H. Lofy, J. Wiesman, H. Bruce, C. C. Spitters, K. Ericson, S. Wilkerson, A. Tural, G. Diaz, A. Cohn, L. Fox, A. Patel, S. I. Gerber, L. Kim, S. Tong, X. Lu, S. Lindstrom, M. A. Pallansch, W. C. Weldon, H. M. Biggs, T. M. Uyeki, S. K. Pillai, First case of 2019 novel coronavirus in the United States, *The New England Journal of Medicine*, (2020), Vol.382, pp.929-936.
DOI: <https://doi.org/10.1056/NEJMoa2001191>
- [2] Coronavirus Guidelines for America – The White House, (2023)
Available from: <https://trumpwhitehouse.archives.gov/briefings-statements/coronavirus-guidelines-america/>
- [3] K. Pearce, What is social distancing and how can it slow the spread of COVID-19? (2023)
Available from: <https://hub.jhu.edu/2020/03/13/what-is-social-distancing/>
- [4] CDC Museum COVID-19 Timeline, (2023)
Available from: <https://www.cdc.gov/museum/timeline/covid19.html>
- [5] A. Wilder-Smith, D. O. Freedman, Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel Coronavirus (2019-nCoV) outbreak, *Journal of Travel Medicine*, (2020), Vol.27, No.2.
DOI: <https://doi.org/10.1093/jtm/taaa020>
- [6] R. O. Jackson, Black immigrants and the rhetoric of social distancing, *Sociology Compass*, (2010), Vol.4, No.3, pp.193-206.
DOI: <https://doi.org/10.1111/j.1751-9020.2009.00266.x>
- [7] S. Dutta, Top 10 famous newspapers in the world 2023, (2023)
Available from: <https://www.edudwar.com/top-10-newspapers-in-the-world/2022>
- [8] M. J. Pedersen, N. Favero, Social distancing during the COVID-19 pandemic: Who are the present and future noncompliers?, *Public administration review*, (2020), Vol.80, No.5, pp.805-814.
DOI: <https://doi.org/10.1111/puar.13240>
- [9] A. L. Eden, B. K. Johnson, L. Reinecke, S. M. Grady, Media for coping during COVID-19 social distancing: Stress, anxiety, and psychological well-being, *Frontiers in psychology*, (2020), Vol.11.
DOI: <https://doi.org/10.3389/fpsyg.2020.577639>
- [10] S. Boon-Itt, Y. Skunkan, Public perception of the COVID-19 pandemic on Twitter: sentiment analysis and topic modeling study, *JMIR Public Health and Surveillance*, (2020), Vol.6, No.4, e21978.
DOI: <https://doi.org/10.2196/21978>
- [11] S. Saleh, C. Lehmann, S. McDonald, M. Basit, R. Medford, Understanding public perception of coronavirus disease 2019 (COVID-19) social distancing on Twitter, *Infection Control & Hospital Epidemiology*, (2021), Vol.42, No.2, pp.131-138.
DOI: <https://doi.org/10.1017/ice.2020.406>
- [12] N. R. A Putra, Discourse Analysis on A Governments' COVID-19 Protocols Video Titled "Social Distancing, The Art of Teaching English As a Foreign Language, (2023), Vol.4, No.1, pp.30-35.
DOI: <https://doi.org/10.36663/tatefl.v4i1.495>
- [13] B. Nerlich, R. Jaspal, Social representations of 'social distancing' in response to COVID-19 in the UK media, *Current Sociology*, (2021), Vol.69, No.4, pp.566-583.
DOI: <https://doi.org/10.1177/0011392121990030>
- [14] S. S. Fatima, Understanding the Construction of Journalistic Frames during Crisis Communication : Editorial Coverage of COVID-19 in New York Times, Södertörn University, Master Thesis, (2020)
Available from: <http://urn.kb.se/resolve?urn=urn:nbn:se:sh:diva-41254>
- [15] P. D'Angelo, Framing: media frames, *The International Encyclopedia of Media Effects*, New York: Wiley, (2017)
DOI: <https://doi.org/10.1002/9781118783764.wbieme0048>
- [16] A. Jeon, Y. Lee, A study on user perceptions of airline in-flight meal cafes using big data, *International Journal of*

- Tourism and Hospitality Research, (2022), Vol.36, No.8, pp.169-183.
DOI: <https://doi.org/10.21298/IJTHR.2022.8.36.8.169>
- [17] N. Jin, Semantic Network analysis of domestic and overseas media coverage regarding Korea MERS, Kyungpook National University, Master Thesis, (2017)
- [18] J. Silge, D. Robinson, Text mining with R: A tidy approach, O'Reilly Media, Inc., (2017)
- [19] The New York Times, (2023)
Available from: <https://www.nytimes.com/>
- [20] Textom, (2023)
Available from: <https://www.textom.co.kr/home/main/main.php>
- [21] UCINET software, (2023)
Available from: <https://sites.google.com/site/ucinetsoftware/home>
- [22] M. Anandarajan, C. Hill, T. Nolan, Term-Document Representation, In: Practical Text Analytics, Advances in Analytics and Data Science, (2019), Vol.2, Springer, Cham.
DOI: https://doi.org/10.1007/978-3-319-95663-3_5
- [23] L. C. Freeman, Centrality in social networks: Conceptual clarification, Social network: critical concepts in sociology, Londres: Routledge, (2002), Vol.1, pp.238-263.
- [24] R. L. Breiger, S. A. Boorman, P. Arabie, An algorithm for clustering relational data with applications to social network analysis and comparison with multidimensional scaling, Journal of Mathematical Psychology, (1975), Vol.12, No.3, pp.328-383.
DOI: [https://doi.org/10.1016/0022-2496\(75\)90028-0](https://doi.org/10.1016/0022-2496(75)90028-0)
- [25] W. Poirier, C. Ouellet, M. A. Rancourt, J. Béchard, Y. Dufresne, (Un) covering the COVID-19 pandemic: framing analysis of the crisis in Canada, Canadian Journal of Political Science/Revue canadienne de science politique, (2020), Vol.53, No.2, pp.365-371.
DOI: <https://doi.org/10.1017/S0008423920000372>
- [26] J. N. Ogbodo, E. C. Onwe, J. Chukwu, C. J. Nwasum, E. S. Nwakpu, S. U. Nwankwo, S. Nwamini, S. Elem, N. I. Ogbaeja, Communicating health crisis: a content analysis of global media framing of COVID-19, Health Promot Perspect, (2020), Vol.10, No.3, pp.257-269.
DOI: <https://doi.org/10.34172/hpp.2020.40>
- [27] A. Dudo, D. Brossard, J. Shanahan, D. A. Scheufele, M. Morgan, N. Signorielli, Science on television in the 21st century: Recent trends in portrayals and their contributions to public attitudes toward science, Communication Research, (2011), Vol.38, No.6, pp.754-777.
DOI: <https://doi.org/10.1177/0093650210384988>
- [28] D. Chong, J. N. Druckman, Framing Public Opinion in Competitive Democracies, American Political Science Review, (2007), Vol.101, No.4, pp.637-655.
DOI: <https://doi.org/10.1017/S0003055407070554>
- [29] E. Yeo, K. Park, D. Lee, Exploring Media Depiction of “Social Distancing” During COVID-19 Using Topic Modeling and Word Correlation, Asia-pacific Journal of Convergent Research Interchange (APJCRI), (2021), Vol.7, No.8, pp. 357-366.
DOI: <http://dx.doi.org/10.47116/apjcri.2021.08.33>