News Coverage of the COVID-19 Outbreak: Thematic Analysis of a Portuguese Quality Newspaper

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Abstract

News coverage can play a vital role during public health crises, raising awareness about potential risks, informing about response efforts, and encouraging preventive behaviors. However, the COVID-19 pandemic has increased the precariousness of journalists while introducing new challenges in their work. This article presents the results of a thematic analysis of 612 news articles about the initial stages of the COVID-19 outbreak in Portugal, published in a Portuguese quality newspaper from January to March 2020. Results show the relevance of geographical and cultural proximity as news values in international coverage. While the quantification of cases and deaths was a prominent theme in international and domestic coverage, specific cases of infection were frequent in domestic news, while general epidemiological indicators were more often the main theme in international coverage. News about events in Portugal was also more focused on specific containment and mitigation measures, while international coverage found states of emergency and lockdowns more newsworthy. As for news sources, there was a clear dependence on public officials and press releases from Direção-Geral de Saúde as information sources. The experiences and opinions of people speaking as individuals and not on behalf of organizations were much less frequent.

Keywords

COVID-19, pandemic, newspaper, information sources, news values

Cobertura Noticiosa do Surto de COVID-19: Análise Temática de um Jornal Português de Referência

Resumo

A cobertura noticiosa pode desempenhar um importante papel durante crises de saúde pública, alertando para os potenciais riscos, informando sobre medidas de resposta e encorajando comportamentos preventivos. No entanto, a pandemia COVID-19 aumentou a precariedade dos jornalistas, ao mesmo tempo introduzindo novos desafios no seu trabalho. Este artigo apresenta os resultados de uma análise temática a 612 notícias sobre o período inicial do surto de COVID-19 em Portugal, publicadas num jornal português de referência, de janeiro a março de 2020. Os resultados mostram a relevância da proximidade geográfica e cultural como valores-notícia da cobertura internacional. Ainda que a quantificação de casos e mortes tenha sido um tema proeminente tanto em notícias internacionais como nacionais, a cobertura doméstica deu maior relevo a casos específicos de infeção, enquanto os indicadores epidemiológicos gerais

foram mais frequentemente o tema principal da cobertura de outros países. Notícias sobre eventos em Portugal focaram mais frequentemente medidas específicas de contenção e mitigação, ao contrário da cobertura internacional, que valorizou antes os estados de emergência e quarentenas. Relativamente a fontes de informação, houve uma clara dependência de representantes do Estado e comunicados de imprensa da Direção-Geral de Saúde. As experiências e opiniões de pessoas que falam a título individual, e não em representação de uma instituição, foram muito menos frequentes.

1. Introduction

Public health crises are disruptive events with economic, social, and political consequences that bring about uncertainty and disturbances to everyday life. Consequently, the demand for trustworthy and reliable information increases, making news media organizations crucial for disseminating information about potential risks, due to their reach and systematic coverage. However, the recent COVID-19 pandemic arrived in a context of change for news organizations, marked by declining revenues and still unproven digital business models. The pandemic also deteriorated journalists' already precarious conditions while introducing new challenges in their work. Therefore, it becomes relevant to understand how journalists covered the pandemic amid these challenges — this article contributes to research on journalism during public health crises by presenting the results of a thematic analysis of domestic and international coverage of the COVID-19 pandemic on *Público*, a quality Portuguese newspaper. More specifically, it looks into the main news values and information sources driving the coverage between January and March 2020. This period includes the initial stages of the outbreak, when news of an epidemic in Wuhan first broke out, to the first cases of contagion in Portugal and the adoption of the first nationwide response measures.

2. State of the Art

The news media play a central role during public health crises by serving information to people in real-time while also monitoring reactions to Government decisions (Maxwell, 2003; Thomas et al., 2020). They hold the potential to enhance understanding of the pandemic by providing contextual information to mitigate uncertainty (Wray et al., 2008) and promote preventive behaviors (Basch et al., 2020; Rubin et al., 2009). In addition, some authors (Luengo & García-Marín, 2020) argue that the procedures, norms, and methods of professional journalism provide news media with the necessary means and epistemological authority to provide factual and reliable information to their readers, and to counter the spread of misinformation. However, the pandemic also had a serious impact on news organizations that were already facing a difficult context and on journalists, who now had new limitations to their work. These will be addressed below.

2.1. Journalism During the Pandemic

In the years before the pandemic, news consumption habits across Europe were changing, with a slow but steady decline in the readership of print newspapers and a constant increase in the consumption of online media (European Commission, 2019). According to the *Reuters Institute Digital News Report 2018* (Newman et al., 2018), lower circulation values for legacy media resulted in a sharp decline in revenues, while digital initiatives still failed to make up for the difference. Newspapers across Europe and the United States responded by gradually adopting a paid content model, moving away from offering free online news stories supported by advertising (Simon & Graves, 2019). However, the rise of paywalls introduced issues over information inequalities, while "subscriber fatigue" also became a concern (Newman et al., 2019). Despite continued uncertainty, the transition to digital was starting to pay off in 2019, even if the number of subscribers remained relatively low (Newman, 2020).

The same trends were observed in Portugal, where for the first time in early 2020, online platforms surpassed television as the most important source of news (Newman, 2020). During the first lockdown, announced the day after the declaration of a state of emergency on March 18 (Decreto do Presidente da República n.º 14-A/2020, 2020), online news consumption registered a substantial increase (Cardoso et al., 2020), making news media the most sought information source about COVID-19, above other institutional sources. According to other authors (Gonçalves et al., 2023), online news platforms came in second after television but were more frequently used than print media or radio.

Other than accentuating changes in the consumption of news, the pandemic has also had a direct impact on the work of journalists in Portugal, a context already characterized by precarious work relations prior to the public health crisis (Cádima et al., 2022). A survey of 890 Portuguese journalists (Miranda et al., 2021) showed that many were directly affected by pay cuts and lay-offs, a reality that was no different than what was being experienced in other countries (Posetti et al., 2020). Falling advertising revenues also meant more precarious conditions for those working during the pandemic, for whom the lockdown meant working from home. According to the same survey, this often resulted in alienation from co-workers and the professional community. Contact with information sources was now also a challenge, as work-from-home schemes and social distancing led to face-to-face contact being largely abandoned for other forms of communication. While some authors (Lopes, Santos, Peixinho, et al., 2021) highlight how the use of digital platforms during the pandemic lessened the relevance of physical distance as a barrier, therefore contributing to the introduction of a greater diversity of information sources, only 34.3% of the respondents working during the state of emergency admitted having adopted new technological resources (Miranda et al., 2021).

The public health crisis also introduced a new ethical dimension to the work of Portuguese journalists. Not only was the accuracy of the information reported during the pandemic a major concern (Miranda et al., 2021), but journalists now also perceived their role as helping people understand the situation and guiding them toward the adoption of preventive behaviors. Consequently, health and science became priority themes

to be addressed by credible sources, predominantly public officials and experts (Lopes, Santos, Magalhães, et al., 2021). However, journalists often lack the required expertise for reporting on science and medical/health themes (Posetti et al., 2020), increasing their dependence on a limited variety of information sources.

In a context of general uncertainty where news media hold a vital role but where there is increased precariousness in journalism and a more challenging environment for news gathering and reporting, it becomes pertinent to assess the principles guiding newsmaking, or more specifically, what were the news values guiding the coverage of the COVID-19 pandemic.

2.2. News Values and Information Sources

News reporting implies choices over which leads to follow and events to report or what stories might be of interest to a particular audience. These choices are based on criteria, or "news values", by which news media professionals evaluate the "newsworthiness" of a potential story, and which have been a theme of research since Galtung and Ruge's (1965) "The Structure of Foreign News". Despite many revisions (Joye et al., 2016), the 12 news values identified by these authors have been consistently found in later research, including in studies looking into the coverage of public health crises — for instance, geographical proximity and the negative impact of an epidemic (in terms of lives lost) both influence the frequency of coverage, although the significance of these factors may vary across news organizations in different countries (Florea & Woelfel, 2021; Zhang & Cheung, 2022). Cultural proximity, another criterion for newsworthiness identified by Galtung and Ruge (1965), also appears as a salient factor in news reporting routines during public health crises (Joye, 2010; Kim, 2022). The geopolitical importance of affected countries can also contribute to the newsworthiness of an event, with the coverage often reproducing the existing global power relations and hierarchies (Joye, 2010). Other studies (Basch et al., 2020; Smith et al., 2012) have also considered "national relevance" as a news value in the coverage of these events, as the first domestic cases of infection usually result in a substantial increase in media attention.

However, the newsworthiness attributed to current public health risks may also rest on "templates" constructed by previous experiences perceived as similar, particularly when the "lessons learned" are backed by experts. The argument is put forward by Chan (2016), who found that the risks associated with the swine flu were emphasized by the Hong Kong press by drawing on the heavy casualties and turmoil caused by severe acute respiratory syndrome years earlier. Even though the scientific evidence was still largely inconclusive and the available data seemed incongruent, the comparison was supported by health authorities and medical experts, whose assessments were extensively quoted, while alternative interpretations were largely marginalized. According to the author, the authority and reputation of these sources were sought in order to legitimize notions of objectivity and science-based journalism when dealing with an uncertain threat. As an "elite-centered communication system" (Galtung & Ruge, 1965, p. 68), the news media attempt to ground its coverage in "objective" and "authoritative"

statements from "accredited sources", equating institutional positions and social status with credibility. These become the "primary definers" who, having privileged access to journalists, can establish "primary interpretations" of a theme, thus setting the terms and definitions by which all subsequent coverage and debate will be measured (Hall et al., 1978).

However, the prominence of representatives from major institutions and experts is related to legitimizing claims of objectivity and credibility as much as to the pressure of professional demands. Through participant observation in newsrooms and interviews with journalists, Tuchman (1978) observed how institutional sources were embedded in the daily routines of journalists who frequently had to meet deadlines and pressure from competing newspapers. By anchoring the "news net" around organizations associated with the generation of news or holding centralized information, editors were better able to control the flow of work and plan the allocation of personnel and physical resources. The resulting coverage "both draws upon and reproduces institutional structures" (Tuchman, 1978, p. 210), as the hierarchy of information sources mostly reflects "the hierarchies of nation and society" (Gans, 1979/2004, p. 119).

While the dominance of institutional actors as information sources is a point of consensus in journalism research (Traquina, 2004), journalists covering health-related themes are dependent on an even more restricted range of information sources from governments, public health agencies, and the healthcare sector. Along with a selected group of university experts, a "small coterie" (Chan, 2016) of institutional sources act as primary definers. The uncertainty and urgency of public health crises further deepen the journalists' dependence on these sources (Lopes, Santos, Peixinho, et al., 2021). A survey of the coverage of the H1N1 pandemic (Duncan, 2009) identified national and international public health authorities as the main information sources in 75% of 3,979 news articles published in 31 European countries, including Portugal. These results were confirmed by other studies focusing solely on the Portuguese context (Lopes et al., 2012; Lopes & Fernandes, 2012) that found public officials and "specialized and institutional" information sources to be the most frequent. More recently, research on the first year of COVID-19 news coverage confirmed these results, with institutional sources connected to the Portuguese Government and the national public health agency again being the most prominent in television news (Cabrera et al., 2020), reference newspapers and the popular press (Gomes, 2021; Lopes, Santos, Peixinho, et al., 2021). While there was a noticeable increase in the prominence of individual experts in Portuguese newspapers, those who represented an institution or professional group were still the most common.

2.3. Thematic Analysis of the COVID-19 Coverage

This article contributes to this literature by presenting the findings of a thematic analysis of news articles on the COVID-19 outbreak published by *Público*, a Portuguese quality newspaper, during the first three months of 2020. Although the World Health Organization (2020) only declared the outbreak a pandemic on March 11, reports of the epidemiological situation in other countries were already part of *Público*'s coverage in January. News of a repatriation flight bringing Portuguese citizens from Wuhan and

about the situation of the first Portuguese citizen infected with COVID-19 in Japan also made headlines in February, along with reports on "suspected cases". Focusing on this period makes it possible to evaluate the coverage from when the outbreak was still perceived as "a distant threat" (Duarte et al., 2022) until it became a full-blown domestic crisis.

A thematic analysis allows for a comparison of the themes found by the newspaper to be newsworthy in both domestic and international coverage. It will then be possible to move beyond the frequency of coverage as a measure of media attention to discern the themes found to be more relevant at home and abroad. As a second objective, the analysis will also identify the main information sources and those which were the most frequent in the themes considered as more newsworthy.

3. Methodology

Público is one of the main Portuguese daily quality newspapers — its online edition ranked among the five most visited news websites in Portugal in the first three months of 2020 (Grupo Marktest, 2020), reaching more than 3,800,000 people in March. News stories about the COVID-19 pandemic published by the newspaper during this period were gathered using Media Cloud (https://mediacloud.org/), Google site-specific searches for this time frame, and queries on *Público*'s website, always using the same keywords ("covid", "coronavirus", "virus", "sars-cov-2", "n-cov19", "2019-ncov", "pandemic", "epidemic", "wuhan", "pneumonia", "social distancing", "isolation", "lockdown" and "quarantine"). Articles from special COVID-19 sections on the newspaper's website were manually added if not already included. These procedures resulted in around 3,000 links to news stories. The corpus was then constructed by selecting all news published with an interval of seven days to gather articles from different days of the week each week. Duplicates and news stories unrelated to the pandemic were removed, resulting in a corpus of 612 news articles — six published in January, 36 in February, and 570 in March 2020. The date of publication, headline, and geographic location (country) of the events reported were registered for each article.

Each article was classified for its general theme, gathered from the headline and lead paragraph, on the assumption that in news articles, the most important relevant information comes first (van Dijk, 1988). Consequently, a low frequency or complete absence for a particular theme does not mean it is not present in the coverage but that it was not considered relevant enough to make headlines. The classification began by assigning each article to two broad categories — one including reports on the "epidemiological situation" (news about contagion and the economic, political, and social consequences of the public health crisis), and one other with all stories on the "pandemic response" (including news about all types of measures, both proposed and adopted). These were further specified in lower-level categories, inductively created from several readings of the corpus. A second coder classified 67 articles (11% of the corpus) using a codebook with category descriptions. The initial percent agreement was 76.1%, but all divergences were discussed until both coders agreed.

All references to information sources were also registered, with each one being counted only once for each article (i.e., one attribution per article), to avoid swelling their relevance due to discursive styles (e.g., repeated attributions for the same information). Information sources were then classified either as institutional or individual voices — the former included representatives of organizations (e.g., governments, business companies, non-governmental organizations, religious organizations) and particular groups (e.g., professional groups, consumer associations), along with press releases, reports and other forms of institutional communication. These sources were then grouped according to the type of organization (e.g., "associations", "businesses", "NGOs", "State and public institutions"). Individual information sources included all actors speaking on their own behalf and not as institutional representatives. These were grouped in accordance to how they were described in news articles, most often by categories based on a professional activity (e.g., "health worker", "politician", "sports player", "student"). For example, experts were classified as institutional sources if their comments were made as public officials or holders of information that represented an institution or group, as in medical professionals speaking for the response capacity of a particular service or department. They were instead classified as individuals when, for instance, asked for their personal, subjective assessments of the epidemiological situation and response efforts.

4. Results

The corpus includes coverage of 40 countries, although only eight counted 10 or more articles. Table 1 shows the distribution of news articles by month and country of coverage. Most of the coverage focused on domestic events (348 articles, or 56.9% of the corpus). A total of 53 articles (8.7%) reported events in various countries, with no specific emphasis on one particular geographic location. China (31 articles, 5.1%) had the most coverage after Portugal, while the remaining articles focused on some of the most affected countries in the early stages of the pandemic.

	January		February		March		Total	
	n	%	*n*	%	*n*	%	*n*	%
Portugal	1	16.7	13	36.1	334	58.6	348	56.9
Various	1	16.7	5	13.9	47	8.3	53	8.7
China	4	66.7	11	30.6	16	2.8	31	5.1
Italy					28	4.9	28	4.6
United States					24	4.2	24	3.9
Spain					24	4.2	24	3.9
Brazil					15	2.6	15	2.5
France			5	13.9	8	1.4	13	2.1
United Kingdom			1	2.8	11	1.9	12	2
Others			1	2.8	63	11.1	64	10.5
Total	6	100	36	100	570	100	612	100

Table 1 *News articles by country of coverage and month for countries with 10 or more articles in the corpus*

In January, reported cases of infection in other Asian countries, such as Thailand and Japan, were included in articles about the epidemiological situation in China. Other regions like Oceania, the Middle East, and Africa were rarely the focus of the newspaper's coverage, and in South America, only Brazil counted more than one article in the corpus.

The outbreak received limited attention from the newspaper in the first two months, with only some additional coverage on February 2, on the arrival of a repatriation flight with Portuguese citizens from Wuhan. It was only after the first domestic case of infection was identified on March 2 (Direção-Geral da Saúde, n.d.; Table 2), or as the outbreak became a domestic problem, that the frequency and geographical scope of the coverage increased.

Month	January			February				March				Total	
Day	9	17	25	2	10	18	26	5	13	21	29	*n*	%
Epidemiological situation	1	1	3	6	3	4	3	26	57	37	57	198	32.4
Pandemic response			1	17	2		1	46	224	60	63	414	67.6
Total	1	1	4	23	5	4	4	72	281	97	120	612	100

Table 2 *Number of articles by main theme and day of publication*

Considering the whole corpus, response efforts have drawn attention from the newspaper more often (414 articles, or 67.6%) than developments of the epidemiological (198, 32.4%). However, a closer look at the results by country shows clear differences in how the events in different geographical locations were reported (Figure 1). The clear emphasis on response efforts is observable only in domestic news and in the coverage of France and the United States.
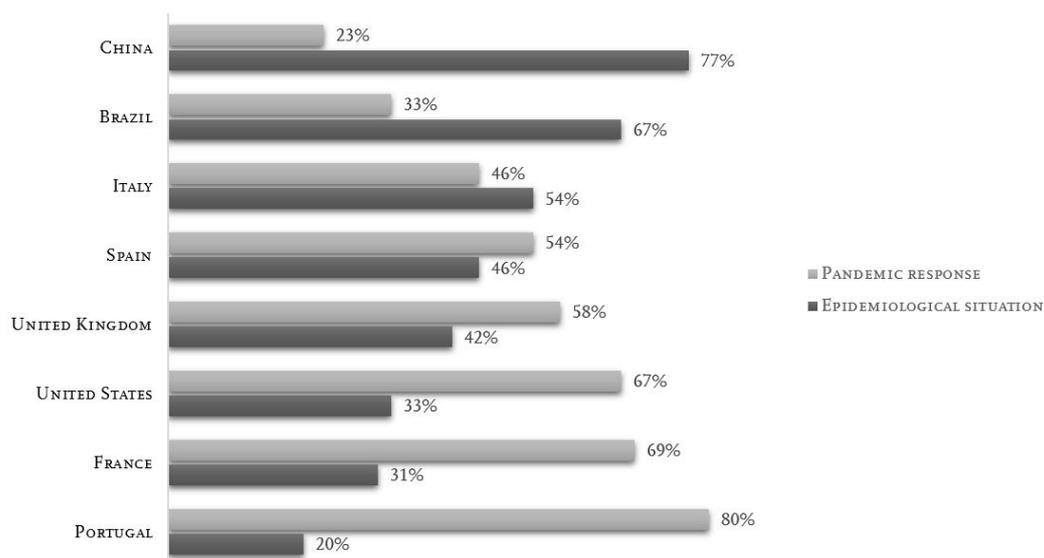

Figure 1 *Percentage of news about the epidemiological situation and the pandemic response by country. Only countries with 10 or more articles are shown*

In contrast, news about Brazil and China was predominantly about the epidemiological situation in these countries and its social, economic, and political repercussions. The next section will describe the themes of coverage beyond these two broad categories and present the main information sources used for each country.

4.1. Main Themes and Information Sources

Even though the outbreak received little attention from *Público* in January, the newspaper reported on the first cases of "Chinese pneumonia" ("Nova Forma de Pneumonia Chinesa Faz Segunda Vítima Mortal", New Form of Chinese Pneumonia Makes Second Mortal Victim; *Público* headline; 9 January 2020). The few articles published on the outbreak at this time focused mostly on how dire the epidemiological situation was in China, with the sole article on response efforts making note of the lack of preparedness of Chinese hospitals ("O Stress É Muito, Tudo o Resto Está em Falta nas Enfermarias de Wuhan", The Stress Is Plenty, and Everything Else Is Lacking In Wuhan Wards; 25 January 2020). On January 25, an article on the "Primeiro Caso Suspeito de Infecção por Coronavírus em Portugal" (First Suspected Case of Coronavirus Infection in Portugal) inaugurated a type of report that would become a staple of domestic coverage, tallying the number of cases and deaths.

The theme "contagion" was, by a wide margin, the most frequent — 156 articles, representing 25.5% of the whole corpus and 78.8% of all news about the epidemiological situation. It included reports on the number of cases and deaths, specific cases of contagion and recovery, the spread to different countries, and information on symptoms and modes of transmission ("Número de Mortos Pelo Novo Coronavírus na China Continental Sobe para 1807", Death Toll From Novel Coronavirus in Mainland China Rises to 1,807; 18 February 2020). Besides the immediate consequences for public health, economic consequences ("Bolsas Europeias com Sessão Volátil Após Queda de Wall Street", European Stocks in a Volatile Session After Wall Street Crash; 26 February 2020) took precedence over political and social consequences, representing 10.1% of all news about the epidemiological situation.

	January		February		March		Total	
	n	%	*n*	%	*n*	%	*n*	%
Epidemiological situation	**5**	**83.3**	**16**	**44.4**	**177**	**31.1**	**198**	**32.4**
Contagion	5	100	10	62.5	141	79.7	156	78.8
Economic consequences			2	12.5	18	10.2	20	10.1
Political consequences			1	6.3	10	5.6	11	5.6
Social consequences			3	18.8	2	1.1	5	2.5
Causes of the pandemic					4	2.3	4	2
Consequences for the environment					2	1.1	2	1
Pandemic response	**1**	**16.7**	**20**	**55.6**	**393**	**68.9**	**414**	**67.6**
Containment & mitigation in facilities & services					80	20	80	19
State of emergency					58	14.8	59	14.3
Planning & preparedness			1	5	57	14.8	58	14
Support & aid			1	5	43	10.9	44	10.6
Gatherings & events					40	10.2	40	9.7
Conditions of healthcare systems	1	100	4	20	32	8.1	37	8.9
International relations & cooperation			13	65	9	2.3	22	5.3
Information					20	5.1	20	4.8
Air travel & border control					19	4.8	19	4.6
Closed facilities & services					11	2.8	11	2.7
Tests & monitoring					9	2.3	9	2.2
Medicine & personal protective equipment					5	1	5	1.2
COVID research			1	5	4	1	5	1.2
Housing & sanitation					3	0.8	3	0.7
Prophylactic isolation					3	0.8	3	0.7
Total	**6**		**36**		**570**		**612**	

Table 3 *Main themes of coverage by month*

As the number of confirmed cases and affected countries increased, so did the frequency and diversity of coverage. After the first domestic case, news about the response efforts led by various governments and public health agencies became more frequent, with the containment and mitigation measures adopted in various types of facilities and services being the most common subtheme (19%) in news about the pandemic response ("Madrid Fecha Estabelecimentos", Madrid Closes Commercial Establishments; 13 March 2020). States of emergency, alert levels, and associated measures — such as lockdowns, calls for social distancing, restrictions on mobility, and public gatherings — were also included in the coverage in March (14.3%, "Califórnia Declara Estado de Emergência Depois de Primeira Morte", California Declares State of Emergency After First Death; 5 March 2020), along with articles on "planning and preparedness" (14%, "Ministra da Saúde Admite que o País 'Não Estava Preparado'", Minister of Health Admits "The Country Was Not Ready"; 13 March 2020), which mostly covered nationwide plans and strategies for the organization of response efforts.

Table 4 shows the categories of information sources used for countries with at least 10 articles of coverage in the corpus. Most were institutional (91.7%), with individuals speaking on their own behalf and not in representation of any organization, having a marginal role in every country. Overall, State and public organizations were the most commonly referenced (45.9%, with governments and institutions of governance being the most prominent in all countries), followed by news agencies (14.3%) and businesses (13.2%).

	Portugal		China		Italy		Spain		United States		Brazil		France		United Kingdom		Total	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
All sources	616	100	124	100	42	100	37	100	43	100	37	100	20	100	36	100	955	100
Individuals	50	8.1	17	13.7	4	9.5			2	4.7	2	5.4			4	11.1	79	8.3
Experts	16	2.6	9	7.3					2	4.7					2	5.6	29	3
Organizations	566	91.9	107	86.3	38	90.5	37	100	41	95.3	35	94.6	20	100	32	88.9	876	91.7
State & public organizations	290	47.1	47	37.9	15	35.7	17	45.9	19	44.2	19	51.4	10	50	21	58.3	438	45.9
Governmental organizations	230	37.3	26	21	10	23.8	16	43.2	18	41.9	17	45.9	7	35	16	44.4	340	35.6
Public organizations	50	8.1	19	15.3	5	11.9			1	2.3	1	2.7	3	15	5	13.9	84	8.8
News agencies	86	14	21	16.9	6	14.3	6	16.2	5	11.6	4	10.8	5	25	4	11.1	137	14.3
Business	53	8.6	22	17.7	10	23.8	12	32.4	15	34.9	10	27	2	10	2	5.6	126	13.2
Associations	59	9.6															59	6.2
Political parties	38	6.2					1	2.7							4	11.1	43	4.5
Supra-State organizations	8	1.3	11	8.9	1	2.4			1	2.3			2	10	1	2.8	24	2.5
Social/humanitarian organizations	12	1.9															12	1.3
Religious organizations	10	1.6			1	2.4											11	1.2
Sports organizations	3	0.5			3	7.1	1	2.7					1	5			8	0.8
Foundations	7	1.1															7	0.7
Academic journals			3	2.4	1	2.4											4	0.4
Environmentalist movements			3	2.4													3	0.3
Non-governmental organizations									1	2.3	2	5.4					3	0.3

Table 4 *Information sources identified for all countries with more than 10 articles of coverage. While representing only 3%, "experts" were the most frequent category for individual information sources*

The most common information sources in domestic coverage were State and public institutions (47.1% of all attributions) and news agencies (14%). Among public organizations, healthcare institutions and local health administrations were the most frequent information sources (representing 42% of all public institutions and 3.4% of all information sources). There were few testimonies from individual sources (8.1%). When present, "experts" were the most common category (32% among individual sources, 2.6% in all sources for domestic news). Some types of news sources were exclusive to domestic coverage — for instance, associations and political parties were among the most frequent when reporting events in Portugal, while mostly absent from the coverage of other countries.

The next section offers a more detailed look at the themes and information sources in domestic coverage, which represented the biggest share of all articles in the corpus, to compare later with the coverage of other countries.

4.2. Domestic Coverage

From the 348 articles of domestic coverage (Table 5) only one was published in January, reporting on a suspected case of infection. Similar reports would continue in February (two articles on the "contagion" theme) when most news about response efforts would be about an internationally coordinated repatriation flight bringing Portuguese citizens from Wuhan (seven articles in the "international relations" category, e.g., "Portugueses Já Estão a Embarcar no Voo de Regresso a Portugal", Portuguese Are Already Boarding the Flight Back to Portugal; 2 February 2020). Other themes in February included delays in the availability of guidelines for first responders (in "conditions of healthcare systems"; e.g., "Técnicos do INEM Criticam Atraso na Divulgação de Normas a Adoptar", INEM Technicians Criticize Delay in Disclosing Standards to Be Adopted; 2 February 2020).

	JANUARY		FEBRUARY		MARCH		TOTAL	
	n	%	n	%	n	%	n	%
Epidemiological situation	1	100	2	15.4	65	19.5	68	19.5
Contagion	1	100	2	100	49	75.4	52	76.5
Economic consequences					11	16.9	11	16.2
Political consequences					3	4.6	3	4.4
Social consequences					2	3.1	2	2.9
Pandemic response			11	84.6	269	80.5	280	80.5
Containment & mitigation in facilities & services					75	27.9	75	26.8
Planning & preparedness			1	9.1	41	15.2	42	15
Support & aid					34	12.6	34	12.1
State of emergency					26	9.7	26	9.3
Conditions of healthcare systems			3	27.3	23	8.6	26	9.3
Gatherings & events					23	8.6	23	8.2
Information					15	5.6	15	5.4
Air travel & border control					11	4.1	11	3.9
International relations & cooperation			7	63.6	1	0.4	8	2.9
Tests & monitoring					8	3	8	2.9
Closed facilities & services					5	1.9	5	1.8
Prophylactic isolation					3	1.1	3	1.1
COVID research					2	0.7	2	0.7
Medicine & personal protective equipment					1	0.4	1	0.4
Housing & sanitation					1	0.4	1	0.4
Total	1		13		334		348	

Table 5 *Main themes of domestic coverage by month*

After the first domestic case of infection on March 2, the frequency and thematic diversity of domestic coverage would greatly increase, focusing on response efforts and measures (the main theme of 80.5% of all domestic news). Among them, the containment and mitigation measures adopted in various types of facilities and services would be the most common theme (26.8% of all news about the pandemic response; "Salas de Isolamento Obrigatórias em Todos os Tribunais", Isolation Rooms Become Mandatory in All Courts; 5 March 2020), while "planning and preparedness" related to response efforts was the main theme of 42 articles (15%; "Qual o Plano de Choque Para Enfrentar o Coronavírus ", What Is the Shock Plan to Face the Coronavirus?; 13 March 2020).

News about containment and mitigation measures in facilities and services (75 articles) were more often about public (49 articles, 65.3%) than private facilities and services (21 articles, 28% — the remaining five articles covered measures to be adopted in both public and private services). The education system was more frequently the main theme of the coverage about public services (16 articles, 32.7%, e.g., "Professores Poderão Trabalhar à Distância 'Sempre que Possível'", Teachers Will Be Able to Work Remotely "Whenever Possible"; 13 March 2020), while coverage of private services focused more

often on commercial facilities (nine articles, 42.9%, e.g., "Centros Comerciais Preparados Para Manter Abertos Apenas Serviços Essenciais", Shopping Centers Prepared to Keep Only Essential Services Open; 21 March 2020). These themes were almost exclusive to domestic coverage, with only five other articles reporting on similar measures in other countries.

The emphasis on public services is easily explained by the availability of this information, divulged in weekly press conferences with Government officials, who were credited as information sources in 26.3% of all attributions on this theme ("Tem Filhos na Escola? Conheça as Três Orientações do Governo às Escolas", Do You Have Children at School? Find Out About the Government's Three Guidelines For Schools; 5 March 2020). News agencies represented 15%, and figures of local Government 10%. There were only two occurrences (2.5%) of individuals as information sources for this theme.

News about "planning and preparedness" was almost as much about advice on individual behavior (16 articles, 38.1%; e.g., "O que Fazer Quando Se Suspeita de Estar Infectado com COVID-19?", What to Do When You Suspect You Are Infected With Covid-19?; 13 March 2020) as on national strategies and response efforts (21 articles, or 50% — including seven articles reporting on problems with said strategies; e.g., "Marta Soares Denuncia Falta de Planeamento e Pede Linha Telefónica Para Bombeiros", Marta Soares Denounces Lack of Planning and Asks for a Hotline for Firefighters; 13 March 2020).

Recommendations in news about individual behavior came mostly from Government officials (23.5%) and experts (14.7%). In news about planning and preparedness, representatives of Government and the presidency were the most frequent sources (48.4%), followed by political parties (35.5%).

Support and aid measures accounted for only 12.1% (34 articles) of all news about the pandemic response. Among these, "targeted economic aid" was the most expressive category (18 articles, 52.9%), with 11 news stories focusing on support aimed at workers and families ("Trabalhadores em Isolamento Profiláctico Recebem 100% da Remuneração", Workers in Prophylactic Isolation Receive 100% of Their Pay"; 13 March 2020), and seven on measures meant for businesses ("Criada Linha de Crédito Para Microempresas do Sector Turístico", Government Creates Credit Line to Help Tourism Microenterprises; 13 March 2020). Again, representatives of Government and political parties were the most common sources for this theme (65% and 15%, respectively). Individuals as information sources were completely absent, even when reporting on economic support for workers and families.

News about developments in the epidemiological situation was mostly about "contagion" (52 articles, or 76.5%) — around half of these articles (27, or 51.9%) focused on specific cases of infection, which included individual cases ("Mãe Infectada Leva a Encerramento de Escola em Lisboa com 200 Alunos", Infected Mother Leads to the Closure of a School in Lisbon With 200 Students; 5 March 2020) and reports on clusters of cases found in various institutional settings ("Sete Profissionais de Saúde em Ovar Diagnosticados com Coronavírus", Seven Health Professionals in Ovar Diagnosed With Coronavirus; 13 March 2020). Another 21 articles (40.4%) reported on the fast spread of the virus, reminding

readers about the growing number of infections, mortality rates, and other epidemiological indicators ("Taxa de Letalidade em Portugal É de 1%", Lethality Rate in Portugal Is 1%; 21 March 2020). The remaining articles were about positive cases among public figures (two articles, 3.8%) and cases of recovery (two articles, 3.8%).

Starting on January 25, suspected ("Décimo Primeiro Caso Suspeito do Novo Coronavírus em Portugal É Negativo", Eleventh Suspected Case of the New Coronavirus in Portugal Is Negative; 18 February 2020) and confirmed ("Confirmado 7.º e 8.º Casos de Infecção", Confirmed 7th and 8th Cases of Infection; 5 March 2020) domestic cases of infection were added up in headlines running alongside daily reports of the virus' spread to other countries ("Casos Suspeitos em Portugal Deram Negativo, China Soma Mais de Mil mortes", Coronavirus: Suspected Cases in Portugal Were Negative, China Adds More Than a Thousand Deaths; 10 February 2020). More than half of all articles on specific cases of contagion (15 articles, or 55.6%) identified affected people mostly by their gender and age or place of origin when referring to imported cases. When a professional background was provided, seven articles (25.9%) reported cases among teachers and students and four (14.8%) on infections among medical staff. There were only two articles with "cases of recovery" as the main theme ("Duas Famílias Internadas no S. João Recebem Alta Clínica", Two Families Hospitalized in S. João Receive Clinical Discharge; 13 March 2020), suggesting that morbidity and mortality were considered more newsworthy than recovery.

Information for news about "contagion" came mostly from public health agencies (24.7%) and news agencies (19.4%). Local health administration bodies and other local institutions (including public hospitals) represented 10.8% of all attributions, and Government officials 8.6%. Individuals as sources represented only 7.5% of all attributions, with all but one presented as experts.

Other consequences of the pandemic had comparatively less coverage — economic consequences were the main theme in 11 articles (16.2% in all news about the epidemiological situation), while the political (three articles, 4.4%) and social consequences (two articles, 9%) seemed to be marginal aspects of the pandemic.

4.3. International Coverage

As the domestic coverage increased in March, so did the frequency of articles about other countries. China was the second country with the most coverage on the corpus — however, in contrast with domestic news, coverage of the events in this country focused mostly on its epidemiological situation (Table 6, 24 articles, or 77.4% of all coverage on this country). Most articles on this theme were about "contagion" (17 articles, 70.8%), and they focused mostly on the general spread of the virus (13 articles, or 76.5% of all articles about contagion; e.g., "Novas Infecções em Wuhan Devem Chegar a Zero no Fim de Março", New Infections in Wuhan to Reach Zero by the End of March; 5 March 2020). While most domestic coverage on the contagion theme was about specific cases of contagion, there were only three similar articles (17.6%) in coverage of events in

China. Cases of recovery were again backgrounded — while these references were part of the coverage about this country, they were never considered relevant enough to make headlines in the articles included in the corpus. All other themes related to the epidemiological situation represented less than 10% of the coverage, with the economic, political, and social consequences of the outbreak having relatively little expression.

	January		February		March		Total	
	n	%	n	%	n	%	n	%
Epidemiological situation	3	75	8	72.7	13	81.3	24	77.4
Contagion	3	100	5	62.5	9	69.2	17	70.8
Causes of the pandemic					2	15.4	2	8.3
Economic consequences			1	12.5	1	7.7	2	8.3
Consequences for the environment					1	7.7	1	4.2
Social consequences			1	12.5			1	4.2
Political consequences			1	12.5			1	4.2
Pandemic response	1	25	3	27.3	3	18.8	7	22.6
Conditions of healthcare systems	1	33.3	1	12.5			2	8.3
Medicine & personal protective equipment					1	7.7	1	4.2
International relations & cooperation			1	12.5			1	4.2
Support & aid			1	12.5			1	4.2
Air travel & border control					1	7.7	1	4.2
COVID research					1	7.7	1	4.2
Total	4		11		16		31	

Table 6 *Main themes of the coverage of China by month*

As in domestic coverage, international news about "contagion" used mostly information sources from State and public organizations (45.8% of all attributions). These included public health agencies and bodies (11.1%), State media (9.7%), and local public health institutions (8.3%). News agencies represented 19.4% of all attributions, and private media channels 16.7%. The World Health Organization was also credited as an information source on this theme (11.1%).

Coverage of response efforts was less prominent (22.6%) than in domestic coverage. Again, most sources were representatives of State and public institutions (40%) — among them, Government and public health agencies and bodies represented 8% each, the same value for local health institutions. Private media channels were credited in 16% of all attributions in news about response efforts, the same as news agencies. The experiences of individuals speaking on their own behalf were less frequent, representing only 13.7% of all attributions, slightly above the 8.1% found in domestic coverage.

The theme "contagion" was the only one present in the coverage of all other countries with at least 10 articles (Table 7) and it was the most frequent theme overall. These reports were usually about epidemiological indicators. The environmental and economic consequences of the outbreak were also included in the coverage but rarely made headlines.

	Italy		United States		Spain		Brazil		France		United Kingdom		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Epidemiological situation	**15**	**53.6**	**8**	**33.3**	**11**	**45.8**	**10**	**66.7**	**4**	**30.8**	**5**	**41.7**	**53**	**45.7**
Contagion	13	86.7	8	100	11	100	5	50	3	75	5	100	45	84.9
Political consequences							5	50					5	9.4
Social consequences									1	25			1	1.9
Consequences for the environment	1	6.7											1	1.9
Economic consequences	1	6.7											1	1.9
Pandemic response	**13**	**46.4**	**16**	**66.7**	**13**	**54.2**	**5**	**33.3**	**9**	**69.2**	**7**	**58.3**	**63**	**54.3**
State of emergency	5	38.5	7	43.8	7	53.8			1	11.1	1	14.3	21	33.3
Conditions of healthcare systems	4	30.8			4								8	12.7
Planning & preparedness			1	6.3			1	20			5	71.4	7	11.1
International relations & cooperation			2	12.5					4	44.4			6	9.5
Closed facilities & services	2	15.4			1	7.7			2	22.2			5	7.9
Gatherings & events	1	7.7	1	6.3					1	11.1	1	14.3	4	6.3
Containment & mitigation in facilities & services			1	6.3	1	7.7	1	20					3	4.8
Information			2	12.5			1	20					3	4.8
Support & aid	1	7.7	1	6.3									2	3.2
Housing & sanitation							2	40					2	3.2
Tests & monitoring			1	6.3									1	1.6
Medicine & personal protective equipment									1	11.1			1	1.6
Total	**28**		**24**		**24**		**15**		**13**		**12**		**116**	

Table 7 *Main themes of the coverage in countries with more than 10 news articles in the corpus (excluding Portugal and China) by month*

As for news about response efforts, coverage of the United States, Spain, and Italy focused mostly on states of emergency, heightened alert levels, and lockdowns. These themes were more newsworthy than specific response measures, which were largely absent as a main theme in international coverage. Instead, this information was often added as a secondary element in news about the growing number of infections and deaths, which were more easily the stuff of headlines. However, the low frequencies of coverage for these countries in the corpus makes the identification of meaningful patterns difficult.

Overall, international coverage was limited to a few countries and largely focused on the general spread of the virus expressed by epidemiological indicators. Coverage of response efforts reported mostly on declarations of states of emergency and national containment strategies. The coverage rarely looked into the details of specific measures adopted in other countries, thus hindering possible meaningful comparisons.

5. Discussion

This article presented the results of an analysis of the main themes and information sources in the news coverage of the COVID-19 outbreak in a Portuguese reference newspaper during the first three months of 2020. The novelty factor was inherent in the coverage of a yet unknown disease — however, the results show that other news values influenced the newsworthiness of the outbreak. The findings also confirm the findings of previous studies that found Government and Direção-Geral da Saúde (DGS) representatives to be the main information sources on most themes related to the outbreak. The next sections will discuss the results by reference to previous research.

5.1. News Values

In the initial stages of the outbreak, the coverage was limited to a few articles highlighting the lack of preparedness of Chinese political leaders and the conditions of hospitals in China. Headlines reporting on the victims of "Chinese pneumonia" evidenced a general perception of the outbreak as a distant problem. Expert opinion seemed to confirm the low risk — on January 31, regardless of the first cases of infection in France, Germany, and Finland, the European Centre for Disease Prevention and Control (2020) still considered the risk of community transmission in the European Union to be "very low", if strict prevention and control measures were implemented. In Portugal, the perceived risk might have also been mitigated by previous experiences, as other alerts in the past had triggered the creation of response structures and plans that never saw actual implementation (Duarte et al., 2022). The available "media template" seemed the opposite of the one described by Chan (2016), with expert opinion and previous experiences converging to downplay possible risks.

In line with previous studies that found a drastic increase in media attention only after the first domestic case of infection (Basch et al., 2020; Smith et al., 2012), the outbreak first became a significant part of *Público*'s agenda with the identification of the first positive case in Portugal. The frequency and thematic diversity of the coverage increased substantially thereafter — national relevance or the "impact on the nation and the national interest" (Gans, 1979/2004, p. 148) was one of the main criteria for the newsworthiness of events related to COVID-19, suggesting that events affecting national citizens are more newsworthy than those affecting "others" (Kim, 2022).

As the outbreak became a national problem, international coverage also increased, both in frequency and in the number of countries included in the coverage. What was first reported as a local problem of an Asian country now became a central theme with a dedicated section covering events in multiple locations. The impact of the outbreak (regarding the number of people affected) was a criterion for newsworthiness — six of the countries with the most coverage (except Portugal and Brazil) were also among those with the greatest number of cumulative cases and deaths by the end of March (World Health Organization, n.d.). However, as the results have shown, international coverage favored countries with geographical or cultural proximity — out of the eight countries with

the most coverage, four were also in Western Europe (Spain, France, Italy, and the United Kingdom), and one shares a common language (Brazil). Attention to events in the United States can be attributed to the geopolitical criteria associated with the concept of "elite nations" (Galtung & Ruge, 1965), which denotes a tendency for the events in some countries to be perceived as more newsworthy than others (Harcup, 2020). In contrast, information about the outbreak in other countries deemed less relevant was most often limited to the number of positive cases and deaths added as a secondary event in the final paragraphs of news articles.

While geographical and cultural proximity were criteria for the newsworthiness of events, differences in the thematic focus of different geographical locations were also a consequence of the perceived newsworthiness of specific events in each country — for instance, hesitancy in declaring a state of emergency in the United States and the adoption of a "herd immunity" strategy in the United Kingdom led to an increase in articles about the pandemic response in both these countries. However, some organizational constraints might also have been present, limiting the possibilities of coverage — for instance, besides a permanent international correspondent in Brussels since 2018, *Público* had only one other reporter in São Paulo in February and March 2020[1]. This has likely limited the coverage of other geographical locations to the reports from news agencies and other news providers.

As in previous studies on the coverage of the COVID-19 pandemic (Basch et al., 2020; Hubner, 2021), "contagion" was the most frequent theme overall, as "body count" headlines emphasized a detached quantification of cases. As noted by Lopes, Santos, Peixinho, et al. (2021), this type of coverage was encouraged by DGS daily reports and press conferences emphasizing the quantification of the outbreak. However, while international news focused mostly on the evolution of general epidemiological indicators, domestic coverage favored the details of specific cases of infection — suggesting that "human interest" was considered more relevant, perhaps appealing, when covering events at home.

Other consequences of the pandemic, whether economic, political, environmental, or social, never reached the relevance of the "contagion" theme. The relatively low newsworthiness of economic themes is noteworthy in a newspaper of reference, as the Portuguese economy was particularly vulnerable to the consequences of the pandemic (Peralta-Santos et al., 2021). At the same time, the near absence of other related subthemes is also an interesting aspect of the coverage — both in domestic and international news, cases of recovery were never a priority and rarely made headlines, making morbidity and mortality, therefore, more newsworthy than recovery.

Information on response strategies and measures is necessary during public health crises to mitigate uncertainty and help people understand the roles and responsibilities of the various organizations involved in response efforts (Centers for Disease Control and Prevention, 2014; Wray et al., 2008). In this regard, the domestic coverage significantly emphasized the containment and mitigation measures adopted in various facilities and

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[1] Information kindly provided by *Público*'s journalists, to whom the author is thankful.

services and the general plans and strategies guiding response efforts. Information on preventive behaviors was also included, allowing readers some sense of control while fostering the perception of risks as manageable (Brivio et al., 2020). In contrast, news about specific response measures adopted in other countries was limited, with international coverage of response efforts in other countries being usually constructed around "big" declarations of states of emergency and lockdowns, which were found to be more attractive as headlines.

5.2. News Sources

The predominance of institutional information sources was the most evident result. During the COVID-19 pandemic, the centralized nature of the Portuguese State, compared to Italy or Spain, was likely an advantage for coordinating the initial response efforts (Peralta-Santos et al., 2021), but it might also have increased the news media dependence on Government officials. In line with previous research (Gomes, 2021; Lopes, Santos, Peixinho, et al., 2021), Government and public health agency representatives were the most common information sources in domestic news. The prominence of these actors suggests they had considerable weight in the selection of events and how they were reported. Before the first domestic case of infection, press conferences with the director-general of health were mostly dedicated to reports on suspicious cases. As the outbreak became a national problem, Government members were included in these events to highlight specific response measures and other actions undertaken by the Government. As noted by Lopes, Araújo, and Magalhães (2021), there was a political dimension to these meetings, where these actors often made use of scientific reports, visual aids, and statistics to furnish "a scientifically based argumentative narrative that would convince people to adhere to their communicated measures" (p. 27). These press conferences were complemented by daily bulletins from the DGS with statistical data on cases and deaths, facilitating a type of coverage based on the quantification of cases.

Experts were also frequently quoted as representatives of an institution or professional group. These included mostly healthcare professionals who were extensively quoted on the details of particular cases in the initial stages of the pandemic. As the epidemiological situation added pressure to the National Health Service, their testimonies offered more often critical assessments of the conditions in public healthcare services. Other experts included those with roles in local health administrative bodies and other public health institutions. When included as individual sources (i.e., not speaking on behalf of an institution), they were mostly researchers commenting on their work or offering their personal impressions on the epidemiological situation. There were relatively few occasions when the experiences and opinions of the common citizen with no particular expertise or position were part of the coverage, even in themes affecting their lives.

6. Conclusion

The findings presented in this article provide evidence about the criteria for newsworthiness guiding the coverage of the initial stages of the pandemic in one of the main Portuguese quality newspapers. The impact of the pandemic, geographic and cultural proximity, and national relevance were the main news values found in international coverage. As for events in Portugal, previous experiences seem to have lowered the perceived risk and, consequently, also lowering the newsworthiness of the outbreak until the first domestic case of infection.

Although in part a product of organizational constraints, the relatively narrow scope of international coverage was a limitation, hindering possible comparisons of the Portuguese response to the pandemic with the measures adopted in other contexts. While there were differences in how events in other countries were covered, updates on the number of cases and deaths were a constant feature of both international and domestic coverage. The urgency in these headlines, in which the number of cases and fatalities rose with barely a mention of recovery cases, ran counter the mixed messages in the discourse of public officials (Cádima, 2021; Lopes, Araújo, & Magalhães, 2021). Even so, there was an over-reliance on Government representatives and other public officials. Particularly in the initial stages, the rhythm of domestic coverage was in no small measure dictated by DGS press releases and press conferences — newsworthiness was most often tied to the validation of suspected cases, daily updates on the number of cases, or other information provided by this institution. As was observed by other authors (Lopes, Araújo, & Magalhães, 2021), there was a convergence between the themes where official sources were quoted the most and the moments that seemed more relevant in the coverage. However, these results have to be contextualized against the background described earlier — news organizations throughout Europe were already vulnerable before 2020, and Portugal was no exception. The pandemic worsened the already precarious condition of journalists and news organizations while presenting new and unexpected challenges — not least among them, the role of facilitators for scientific and medical information was assumed by journalists who often lacked experience in these fields. The lack of training in medical and scientific themes was also likely a factor, which, together with the need to provide timely and accurate information during a public emergency, increased the dependence on official press releases and reports. The general financial viability of news organizations and adequate conditions for the work of journalists should therefore be a public concern.

Public health crises are particularly sensitive moments — besides increased uncertainty and disruptions to social and economic life, response efforts often include severe restrictions on civil rights and liberties. These are moments when the media's autonomy and independence from political power should be valued the most to ensure transparency and accountability in political decision-making processes. The over-dependence on public officials can also be a threat to media pluralism if this leads to limited access to the media by other social actors.

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