
Miscellaneous

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Hydroxychloroquine as a COVID-19 treatment: an analysis of Brazil's far-right media

Abstract

This article examines how Brazilian far-right media framed hydroxychloroquine (HCQ) as part of a COVID-19 preventive protocol, referred to as “early treatment.” Brazilian partisan outlets extensively endorsed HCQ’s scientific soundness, helping to legitimize Bolsonaro’s pandemic response. By pushing HCQ, the Brazilian Federal Government downplayed social distancing, aligning itself with herd immunity strategies. A Correspondence Factorial Analysis (CFA) of the most influential partisan outlets extracted three major framings present in the media materials: “Scientific Evidence,” “Personal Experience,” and “Freedom to Medicate.” A subsequent Content Analysis found twenty-six scientific claims regarding the HCQ protocol. Far-right media in Brazil have framed unproven substances for COVID-19, regardless of compelling evidence of their ineffectiveness. Brazil’s case shows the need for a deeper understanding of how partisan vehicles frame contemporary social problems as they legitimize policies contrary to scientific consensus.

Keywords

Framing, partisan media, disinformation, COVID-19, hydroxychloroquine

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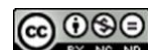
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1. Introduction

In an era of fast-evolving platforms, where digital ecosystems alter communication and lead to a more fragmented media landscape, new journalistic platforms have emerged. By lowering editorial standards to cater to political hardliners, partisan media outlets blur the lines

between legacy and new media, engaging audiences, pushing extreme agendas (Recuero, Soares, Zago, 2020a; Recuero, Soares, Gruzd, 2020b) and disseminating content without expert scrutiny (Peucker & Fisher, 2023). Understanding these outlets is paramount for navigating 21st-century crises and assessing their influence on public framing and institutional responses.

During COVID-19, Brazil saw a strengthening of partisan media influence, with far-right outlets playing a prominent role in shaping the debate on public health protocols. Rather than a risk communication approach grounded in compelling scientific evidence (Taylor, 2021, di Giulio,



Mendes, Campos & Nunes, 2023, Campos, Mendes, Lima, di Giulio, 2023), former president Bolsonaro and his government (2019–22) managed disinformation campaigns to advance their political agenda (Ricard & Medeiros, 2020; X). These efforts ranged from opposition to social distancing (Hallal, 2021) and attacking critics of Bolsonaro's response to COVID-19 (Floss, Tolotti, Rossetto, Camargo, Saldiva, 2023; Ricard & Medeiros, 2020; di Giulio et al., 2023) to unproven treatments (Taylor, 2021), notably hydroxychloroquine (HCQ). The HCQ protocol was thought promoted as a way to supposedly to shield the immune system from COVID-19 before infection or, at least, to reduce its viral load. This helped to rationalize it as an “early treatment” (Floss et al., 2023, di Giulio et al., 2023), influencing health policies and the communication of the Bolsonaro administration during the pandemic.

In complex health crises, multiple individuals and groups seek to frame their causes, effects, and remedies (Dorison et al., 2022; Rooke, 2021). Framing highlights some aspects of reality, shaping what can be debated, who, and when while driving interpretation and action (Gamson & Modigliani, 1989). Framing shapes risk perception of health crises, such as COVID-19 (Olmastroni, Guidi, Martini, Isernia, 2021), and the individual's willingness to comply with health guidelines (Dorison et al., 2022). Framing by the media significantly influences how the public perceives risks and determines appropriate responses during crises (Moreno et al., 2023; Ogbodo et al., 2020). By selecting and emphasizing specific aspects of an issue, media framing helps construct meaning and guide public interpretation, shaping individual behavior in times of uncertainty (Entman, 1993; Gamson & Modigliani, 1989). As the media highlights new evidence and evolving recommendations, it enables the public to adapt their actions accordingly, while also informing policy discussions, resource distribution, and collective strategies to manage emerging challenges (Anderson, 1997; Hansen, 2019).

This study addressed the following research questions: (a) “How did Brazilian far-right partisan media frame hydroxychloroquine (HCQ) as a preventive protocol for COVID-19 – the early treatment?” and (b) “How do these framings legitimize Bolsonaro's herd immunity strategies to COVID-19?” The following sections explore how partisan media and political leadership in Brazil played a role in shaping and spreading narratives about hydroxychloroquine. The subsequent section outlines the study's methodological framework, detailing the criteria for selecting media outlets, the data collection process, and the analytical approaches used to identify the dominant framings of HCQ within Brazil's far-right media landscape.

1.1. *Grappling with the Partisan Media*

Assuming that reality is socially built constructed and social problems are defined and recognized through intersubjective interactions (Kitchlew, Shahzad & Bajwa, 2015), claims-making and framing are intricately intertwined (Hansen, 2018). On the one hand, claiming a putative condition regards recognizing it as a problem worthy of attention, calling for scientific validation, mobilizing support, and influencing institutional responses (Hannigan, 2022; Loseke, 2003; Yearley, 1992). On the other, framing emphasizes certain aspects of socially constructed reality (Hansen, 2018), reflecting the interests, beliefs, values, and worldviews of individuals and groups (Gamson & Modigliani, 1989). Claims-making is central to frame analysis (Arnall, Hilson, McKinnon, 2019; Joshua & Waljy, 2021; Hansen, 2018) explaining why some issues become public concerns while others fall into ostracism; it involves actors articulating, promoting, and justifying their framings for an issue. Successful claims-making depends on effective framing, as it resonates with audiences and mobilizes support, whereas poor framing struggles to gain traction.

Controversial state affairs typically entail leveraging scientific expertise in the process of decision making as a powerful strategy to legitimize policies and their formulation (Nisbet & Fahy, 2015). The legacy media traditionally served as a prominent source of information

(Hansen, 2018; Hannigan, 2022), due to its extensive reach and agenda-setting potential. Due to the various possible framings of a social problem, its interpretations may vary significantly, aligning with different interests (Semetko & Valkenburg, 2000). News outlets become a battleground for ideological conflicts, shaping public opinion especially on contentious subjects. For instance, the tobacco industry has a long history of relying on the media to cast doubt on the health risks of smoking, which ultimately delayed regulation (Siu, 2009). Green biotechnology also sparked disputes, with some hailing it as a food security breakthrough, while others highlighted health and other risks (Siebert, Herzig, & Birringer, 2022). Climate change, where the fossil fuel industry sows doubt about human impact despite scientific consensus (Megura & Gunderson, 2022), and nuclear energy, which balances low-carbon benefits against risks (Fleishman, 2011), are also contentious issues and public controversies involving science, expertise and framing disputes.

In recent years, we have witnessed the emergence of a new platform-mediated paradigm, as social, alternative, and partisan media transformed mass communication. (Recuero & Soares, 2021; Rooke, 2021). Claims-making and framing, now circulating faster and easier, can rely on poorly conducted scientific research, out-of-context data presented as reliable, or even deliberately fabricated content (Banerjee & Meena, 2021; Shahi et al., 2021; Zhang & Trifiro, 2022) or fake controversies (Rajão, Nobre, Cunha, Duarte, Marcolino & Lima, 2022). Many scholars have explored the impact of digital and social media on the construction of social issues. For example, Cinelli et al. (2020) explored how social media platforms foster echo chambers during COVID-19, leading to polarized groups where misinformation spreads more easily. Gruzd, Mai, and Soares (2022) investigated the role of social media in amplifying polarization and echo chambers on Twitter during the pandemic. They provided empirical evidence on the influence of partisanship and proposed strategies to promote the dissemination of factual information online. Rooke (2021) analyzed alternative media framing during the COVID-19 pandemic, focusing on how these outlets shaped narratives around the virus and public health responses. He highlighted the role of alternative media in constructing counter-narratives that often contradict mainstream sources, contributing to the spread of disinformation and reinforcing ideological divides. Finally, Recuero & Soares (2020) similarly examined the spread of disinformation on social media platforms, emphasizing the mechanisms through which false information circulates and the impact of these dynamics on public perception and behavior.

For the purposes of this research, we adopted Recuero's definition of a typical partisan news outlet: they produce and share biased and slanted information from political parties, ideologies, or political leanings; they present their content as truth at the expense of media (that manipulates and spreads deliberative lies); they handle out-of-context content, leading to misunderstandings; they use sensationalism, pre-existing prejudices, and emotional appeals to persuade audiences (Recuero et al., 2020a). In fact, partisan media seems to be pivotal in framing contemporary global health emergencies and pandemics. Due to their capacity to reach across extreme points of view in a polarized society, it can lead to a state of uncertainties and controversies. The far-right's strategic use of partisan media allows them to challenge and undermine international scientific consensus. In selectively highlighting information that aligns with their narratives and dismissing established research, they create a parallel discourse that can distort public understanding. This not only exacerbates misinformation but also fosters a distrust of legitimate scientific authorities, enabling far-right agendas to gain traction amid global health crises. As these outlets continue to shape perceptions, they pose significant challenges to informed public discourse and collective action.

Partisan media and its potential to inflame public discourse with disinformation seems to be a growing phenomenon among far-right groups worldwide. The literature has increasingly examined the rise of media outlets that exhibit strong political bias, especially toward the right wing. Peuker & Fisher (2023) found that Australian far-right groups rely their claims on partisan outlets and sources, often using ideological content, attacking media, and presenting themselves as independent. Mayerhöffer (2021), for instance, found that partisan media outlets differentiate from mainstream news sources by focusing on specific topics, such as crimes committed by foreign and migrant delinquents, and by using a hyper-partisan approach. Larsson (2019) examined similar right-wing partisan media in Sweden and Heft, Mayerhöffer, Reinhardt, and Knüpfer (2020) explored partisan media platforms within several European countries, considering them pivotal elements of the digital news hubs of right-wing ideologies. Nordheim, Müller and Scheppe (2019) compared the coverage of the refugee crisis by German right-wing media and found that it emphasized negative aspects of the refugee crisis. The US also represents a relevant number of research on partisan media, especially in the context of polarization between Democrats and Republicans (Chung & Jones-Jang, 2022). US polarization can manifest even in vaccine hesitancy, as per the findings of Motta and Stecula (2023). Brazil shows that right-wing followers of partisan Facebook groups and Twitter also massively use partisan media to contest media and their sources as biased experts (Recuero et al., 2021).

In Brazil, the performance of partisan outlets has been documented in literature since at least the Brazilian election in 2018 (Ribeiro & Ortellado, 2018), when the domestic right-wing partisans and their news-looking appearance influenced public opinion. The COVID-19 pandemic was the subject of research in the analysis of communication platforms. Massuchin, Tavares, Mitozo, and Chagas, for instance, after analyzing a network of right-wing groups in WhatsApp (Meta Platforms, Inc) found that partisan outlets were often aiming to produce uncertainties and distrust of scientific evidence. Pereira, Bueno, Bojczuk, Camargo, and Parks (2023) also found a similar pattern in links shared on right-wing groups in WhatsApp and Telegram, noting a lot of disinformation and misinformation content. Ceron, Gruszynski Sanseverino, Santos, and Quiles (2021) analyzed links shared on Twitter related to COVID-19 and discovered that among right-wing users, many partisan outlets are associated with chloroquine against the disease.

At the onset of the pandemic, the media and public health authorities endorsed World Health Organization (WHO) guidelines worldwide, with the most cited being social distancing, mask-wearing, case tracing, and mass testing (Campos et al., 2023). In contrast, Bolsonaro and his allies claimed that lockdowns would harm jobs and the economy, causing more deaths than the virus itself (Campos et al., 2023). As the official communication pushed HCQ protocol, Brazil's media sought to counter allegations of its efficacy (Massarani & Neves, 2022). Faced with a media boycott, Bolsonaro and his allies exploited far-right social media platforms and partisan outlets to promote HCQ favorably (Albuquerque, Oliveira, Quinan, Mazur, 2022; Recuero et al., 2020b). As we see, partisan media outlets can create a false sense of legitimacy, equating their content with credible evidence (Gustafson et al., 2019; Rae, 2021; Recuero et al., 2020a). These outlets lower editorial standards to cater to political extremes, disseminating content without expert scrutiny and relying on unreliable sources (Peuker & Fisher, 2023). This does not imply that partisan media avoid scientific authority; rather, they utilize scientific endorsements to reinforce their claims by integrating scientific authority (Fonseca, Natrass, Lazaro, Bastos, 2021), as they pursue credibility and manipulate information to fit far-right ideological agendas.

1.2. Bolsonaro's Stance on the "Early Treatment"

The origins of HCQ's framing as a "preventive treatment" emerged amid uncertainty about the most suitable response to the pandemic (Malecki, Keating, & Safdar, 2021). In the early stages of COVID-19 in Brazil, several controversies emerged, each reflecting different priorities and health strategies. For instance, "save the economy vs. save lives" saw balancing the economic impacts of lockdowns with the need to protect public health; "vertical vs. horizontal isolation" referred to whether quarantine measures should be targeted at specific vulnerable groups or applied broadly to the entire population. Similarly, "individual freedom vs. collective security" raised questions about the extent to which personal liberties could be restricted in the name of public health. The discussions around "confirmed cases vs. recovered patients" and "lockdowns vs. herd immunity" reflect the uncertainty around epidemiological data and the best strategies for curbing the virus. HCQ, a malaria medicine, rapidly became a candidate for COVID-19 after some *in vitro* trials suggested that it reduced the viral load of SARS-CoV-2 (Gasmi et al., 2021). It quickly gained prominence in the media (Baker & Maddox, 2022), even though most of the tests pointed out precaution and further trials.

Experts, the WHO, and trustworthy sources in the media remarked on their experimental nature, in which the main findings were *in vitro* and non-conclusive, requiring randomized and mass testing, meta-analysis, and review articles (Elavarasi et al., 2020). These endeavors did not avoid some global authorities, like presidents Jair Bolsonaro and Donald Trump (USA), from citing these initial studies (di Giulio et al., 2023; Froehlich, 2020), arguing that lockdowns would lead to an economic crisis, which would affect their popularity (Berlivet & Löwy, 2020). In mid-March 2020, former American President Trump announced that the Food and Drug Administration (FDA) would speed up the production of HCQ, while Bolsonaro mentioned the drug for the first time (Idoeta, 2021). A few days later, while the world witnessed the rise in death tolls in China and Italy, Trump stated that HCQ was "one of the biggest game changers in the history of medicine" (Grant-Kels, 2020). Boris Johnson initially supported a herd immunity approach during the COVID-19 pandemic. However, he rapidly abandoned this strategy and imposed lockdown measures as the situation worsened and public pressure grew (Ashton, 2022).

In April 2020, French microbiologist Didier Raoult, known as "Doctor Chloroquine," published a paper on HCQ efficacy, which was frequently cited by those who endorsed the substance. A month later, Brazil's Ministry of Health official website mentioned for the first time the term "early treatment" and its effectiveness (Floss et al., 2023), shortly before Trump stated that he was administering HCQ for the prevention of COVID-19 (Sattui et al., 2020). Likewise, a report from Brazil's Ministry of Health also recommended seeking early treatment in case of any symptoms (Brandão, Mendonça, Sousa, 2023). All these movements contributed to the growing acceptance of the protocol, legitimizing its administration among the Brazilian population.

At that time, Army General Eduardo Pazuello took over as Brazilian Health Minister after the terms of former ministers Henrique Mandetta (January 2019 - April 2020) and the short-lived Nelson Teich (April 2020 - May 2020), who publicly opposed HCQ (Ventura, Aith, Bôas, Pontes, Pereira, 2024). Between June and July 2020, some publications challenging pro-HCQ studies emerged, influencing public policies in the US (Bull-Otterson et al., 2020), France (Floss et al., 2023), and prompting the discontinuation of clinical trials by the WHO. Since July 2020, there has been compelling evidence that HCQ was ineffective in COVID-19 treatment (Floss et al., 2023), and even President Trump no longer widely supported HCQ, especially after Food and Drug Administration revoked EUA for chloroquine phosphate and HCQ sulfate on 15 June 2020. Again, the support for HCQ was experimental based on evidence, devoid of any robust experiment. Throughout the second half of 2020, there were several statements from the top tier of the

Bolsonaro Government in favor of early treatment. For example, Floss and collaborators (2023) stress the official note on the Ministry of Health website stating “early treatment saves lives” and the case of former chancellor Ernesto Araújo, who said that “sanitarily correct” policies harmed the economy around the world.

While the scientific consensus clearly rejected HCQ worldwide, in Brazil recommendations for HCQ protocol gained traction across multiple channels. Entities including the Federal Council of Medicine, and medical associations like “Doctors for Life,” the Brazilian Medical Association, and the Brazilian Society of Cardiology supported the use of HCQ (Blanco, Koch, Prates, 2022). Their communication primarily took place outside the traditional media, primarily their websites and social media channels (Fonseca et al., 2022) In March 2020, members of the technical body of the Brazilian Infectiology Society endorsed the use of HCQ through social media platforms, even though there was no evidence (Floss et al., 2023). Other groups, such as Doctors for Life, the Brazilian Medical Association, the Federal Council of Medicine, and the Brazilian Cardiological Society, claimed medical freedom as the main justification for their support of HCQ, arguing that the doctor-patient relationship should take precedence over any other recommendations coming from the WHO (ibid.). A clear example of the government’s adherence to early treatment was evident during the Manaus oxygen crisis (from December 2020 to April 2021), under the effect of a new and more transmissible variant (P.1), that seriously affected different Brazilian territories, including the capital of the Amazon state.

Up to that point, the Bolsonaro Government had not implemented anti-lockdown measures, nor had it improved the supply network for essential medical equipment like respirators and oxygen. It also lacked transparency regarding case and death figures and actively promoted the concept of early treatment (di Giulio et al., 2023). As a result, the hospital and funeral systems collapsed, and the Manaus crisis accounted for two-thirds of deaths from COVID-19 in Brazil in that period (Blanco et al., 2023). The Federal Government’s slow response in aiding the municipality contributed to the collapse of its health system (Campos et al., 2023). The tragedy exposed the federal government’s lack of coordination and reluctance to make decisions based on scientific evidence. At the same time, the Federal Government prioritized early treatment over vaccination. While other countries had already begun vaccinating their populations, Brazil was still conducting final laboratory tests. The National Health Surveillance Agency eventually approved the emergency use of the CoronaVac/SinoVaC and AstraZeneca vaccines (Floss et al., 2023), but the Federal Government did not seek diversification, betting only on AstraZeneca (di Giulio et al., 2023).

On April 27, 2021, the Federal Senate established the COVID-19 Congressional Inquiry (CPI, in Portuguese) to investigate the governmental actions and omissions in combating the COVID-19 pandemic. The CPI approved its final report on October 27, 2021, and found that the federal government committed several crimes, including malfeasance, negligence, omission, and violation of preventive health measures. After six months of investigation, the CPI final report presented compelling evidence related to the government’s slow and inefficient procurement of vaccines, the government’s failure to distribute vaccines in a timely and equitable manner, and the government’s promotion of unproven treatments for Covid-19. The government’s procurement of vaccines was slow and inefficient (di Giulio et al., 2023), leading to shortages and difficulties in vaccinating the population promptly. The distribution of vaccines was also inefficient, with no clear plan and slow setup of vaccination centers, resulting in long wait times and difficulties reaching remote areas. Additionally, the HCQ protocol led to people taking these treatments instead of getting vaccinated, putting them at risk of contracting the virus.

2. Methods

Gamson and Modigliani (1989) argue that news narratives convey cultural and symbolic meanings through specific “packages.” These can be unpacked by examining rhetorical elements such as slogans, metaphors, explanations, lexical choices, and imagery, allowing identification of dominant frames. Guided by this approach, our research sought to unpack the framings used by Brazilian far-right partisan media regarding HCQ during COVID-19. To achieve this, we used Iramuteq (version 0.7 beta), an R-based interface, to run Correspondence Factor Analysis (CFA). CFA clusters word associations and organizes them into hierarchical classes, facilitating the identification of latent semantic structures. After, we conducted a qualitative content analysis of the textual corpus, with particular attention to scientific claims. For this study, we define scientific claims as any verbal assertion that presents or mimics scientific reasoning, regardless of scientific consensus or empirical validity.

2.1. Sampling and Data Collection

We collected data from ten Brazilian far-right partisan outlets, selected based on their frequent appearance in peer-reviewed literature (e.g., Ruediger et al., 2022; Soares et al., 2021; Colombo, 2023; Orso et al., 2023; Ferreira & Cruz, 2022). These outlets are known for aligning with the Bolsonaro administration, disseminating political disinformation, and rejecting mainstream scientific perspectives. To ensure both feasibility and representativeness, we limited the sample to ten outlets, striking a balance between scope and analytical depth. The span time (2020–2021) was chosen to coincide with the peak of COVID-19 deaths in Brazil and the height of the HCQ debate. The selection process began with a review of 40 academic studies indexed in Scopus, SciELO, Web of Science, and Google Scholar, using the keywords “partisan media” and “hyper-partisan media.” This review confirmed the relevance of the following outlets: *Jornal da Cidade Online*, *Conexão Política*, *Terra Brasil Notícias*, *Brasil Sem Medo*, *Crítica Nacional*, *Giro de Notícias*, *Mídia Sem Máscara*, *Estudos Nacionais*, *Senso Incomum*, and *Folha Política*. These outlets were further validated through Semrush backlink and domain data, which confirmed their network interconnectivity and visibility within far-right digital ecosystems:

Table 1. Most accessed Brazil's far-right partisan outlets

Rank	website	Referencing Domains	Backlinks
1	jornaldacidadeonline.com.br	55	347k
2	conexaopolitica.com.br	52	347k
3	terrabrasilnoticias.com	51	190k
4	Brasilsemmedo.com	44	26k
5	criticanacional.com.br	43	62k
6	girodenoticias.com	41	1.8k
7	midiasemmascara.net	38	35k
8	estudosnacionais.com	38	31k
9	sensoincomum.org	38	13k
10	folhapolitica.org	34	73k

Source: authors (2024) Referring domains are unique sites linking to a website. More referring domains boost a site's backlink authority. For example, Newyorktimes.com has a score of 100, and Amazon.de 99.

Due to court rulings and platform removals, some sites were partially inaccessible during data collection in December 2023, especially those penalized during Brazil's 2022 election period.

2.2. News Article Retrieval

We retrieved news content using the GNews.io API, which aggregates news across digital platforms. Our Python script (available in supplementary material) queried the API to collect ten articles per outlet that contained both the keywords “early” and “treatment”, published between 2020 and 2021. This ensured a consistent and thematically relevant corpus. According to Google News documentation (<https://support.google.com/news/publisher-center/answer/9606702>), the platform ranks stories based on relevance, prominence, authoritativeness, freshness, and location—contributing to the reliability of the selection process.

2.3. Analytical Procedures

We used Iramuteq 0.7 to conduct a Correspondence Factor Analysis, segmenting the corpus into text fragments and identifying recurring word clusters to form hierarchical semantic classes (Pélissier, 2017). These classes were visually represented via dendrograms to facilitate interpretation. To complement this, we performed Content Analysis based on Bardin (1995), focusing on the identification of scientific claims related to HCQ as “early treatment.” We operationalized scientific claims using Loseke's (2003) definition: verbal, visual, or behavioral expressions that aim to persuade the public to take an issue seriously. The software Taguette 1.3 assisted in identifying and categorizing these claims by allowing systematic highlighting and coding of relevant excerpts across the textual dataset. Taguette is an open-source qualitative analysis tool, particularly useful for managing large text corpora.

3. Results

3.1. Correspondence Factor Analysis (CFA)

The Descending Hierarchical Classification algorithm identified three distinct clusters in the data: Medical Freedom, Scientific Evidence, and Personal Experience (Fig. 1).

“Medical Freedom” (blue) locates in the upper left corner and presents the best distinction among all the framings. “Scientific Evidence” (red, grey), the most dominant framing, showed little variation in its terms and appeared more in the upper right corner. Even though two colors represent two distinct clusters, an in-depth analysis indicated that the terms were so tied that it was indeed a single framing. For instance, “effective” (gray) and “effectiveness” (red), “test” (gray) and “trial” (red), “research” (gray) and “study” (red), “hydroxychloroquine” (gray) and “HCQ” (red). “Personal Experience” appears in the lower right corner and is more spread out, occasionally overlapping with the “Scientific Evidence”, showing these framings were tightly related. “Medical freedom” exhibited words such as “liberdade” (freedom), “direito” (right), “escolher” (choose), emphasizing the autonomy of administering the early treatment. This framing associates with claims on personal freedoms in medical decisions, political or ideological discourse about freedom from regulation, and skepticism towards authority or scientific consensus.

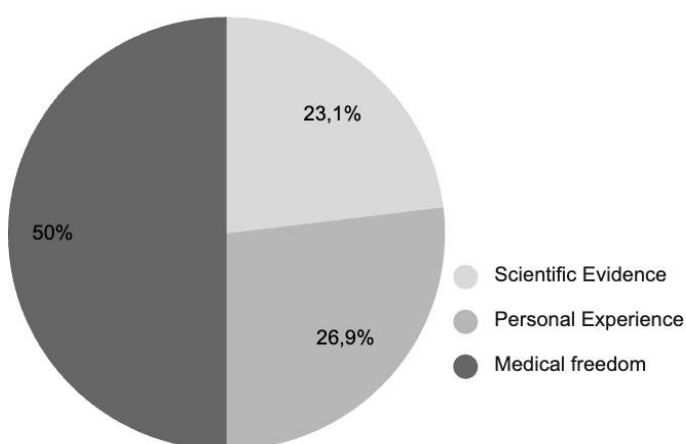
reviewed research, literature reviews, and meta-analyses. By focusing on these terms and selectively citing research, it created an illusion of robust support for HCQ. This framing reinforced Bolsonaro's stance against strict health measures, prioritizing economic concerns over public health. The selective promotion of certain studies, while ignoring broader consensus on HCQ's limited efficacy and the importance of social distancing, justified policies harmful to public health. Manipulating scientific discourse to align with political goals contributed to a narrative favoring economic interests over Brazilian citizens' well-being.

"Personal Experience" (bottom-right) features terms like "pessoal" (personal), "decisão" (decision), and "tratamento" (treatment), focusing on individual experiences and personal testimonies. It emphasizes anecdotal evidence related to health treatments. This cluster highlighted reports from physicians and patients claiming cures after early treatment. By using "Personal Experience" to support hydroxychloroquine (HCQ), it played a key role in legitimizing President Jair Bolsonaro's controversial pandemic policies. The narrative, centered on personal accounts rather than scientific validation, created a misleading sense of HCQ's effectiveness. Bolsonaro used these anecdotes to downplay the pandemic's severity and reject strict public health measures. The emphasis on "successful cases" witnessed by physicians helped justify resistance to social distancing, masking, and lockdowns, prioritizing economic activities over public health. This focus on anecdotal evidence ignored the broader scientific consensus questioning HCQ's efficacy and safety, perpetuating a narrative that supported Bolsonaro's political agenda. By presenting personal testimonies as scientific evidence, this framing distorted public perception, aiding policies that endangered lives and undermined collective, science-based pandemic management.

3.2. Scientific Claims within Framings

Figure 2 presents the scientific claims from each framing. Medical Freedom (50%, 6 of 26) led with the most claims, reflecting a focus on personal choice and opposition to perceived authoritarianism. Personal Evidence (26.9%) emphasized anecdotal experiences, while Scientific Evidence (23.1%) relied on studies and empirical data.

Figure 2. Scientific Claims within Framings



Source: authors (2024).

Table 2 shows twenty-six scientific claims on the early treatment. Claims surrounding the Scientific Evidence affirm that science proved that certain drugs, including HCO and ivermectin, are highly effective in preventing disease progression, hospitalization, and death when used for early treatment of COVID-19. It emphasizes the scientific rigor of studies supporting the effectiveness of the early treatment and the need for further research. Personal Experience claims pointed out the widespread use of early treatment by doctors, highlighting its potential effectiveness based on their observations and experience. It acknowledges the limitations of scientific studies but emphasizes the real-world evidence observed by doctors in clinical practice. Many personal anecdotes report the speed of recovery seen with early treatment compared to other approaches, while it potentially stops the disease from progressing to severe stages. Finally, claims on Medical Freedom paint a picture of a polarized debate around COVID-19 early treatment. They raise doubts about the role of medical authority, patient autonomy, and the influence of economic and political interests in healthcare decisions. These claims accused medical authorities of intentionally spreading misinformation to discredit early treatment, suggesting they have an interest in perpetuating the crisis.

Table 2. Scientific claims legitimizing framings on “early treatment”

Framings	Scientific Claims on COVID-19 early treatment
Scientific Evidence	<p>Studies confirm that some drugs such as HCQ have a very high probability of preventing disease worsening, hospitalization, and deaths</p> <p>Peer-reviewed studies, developed by the rigor of scientific methodology, attest to the HCQ effectiveness</p> <p>International research indicates ivermectin as a preventive treatment in cases of the disease</p> <p>Studies are inconclusive about the effectiveness of HCQ against COVID-19</p> <p>Meta-analyses and literature reviews confirm the effectiveness of HCQ</p> <p>It is proven that with COVID-19 early treatment, the healthcare system would not collapse</p>
Personal Experience	<p>Several doctors attest to the effectiveness of chloroquine, hydroxychloroquine, and ivermectin for the early treatment of COVID-19</p> <p>Early treatment with HCQ was widely administered by many doctors, reducing symptoms and deaths from COVID-19</p> <p>Daily observation of cases confirms the efficacy of HCQ, even though studies may not provide proof yet</p> <p>The results of HCQ are faster than any alternative</p> <p>Doctors have observed that HCQ prevents the infection from progressing to severe cases</p> <p>Many doctors administered HCQ to thousands of patients, demonstrating it works</p> <p>Important figures (mainly Bolsonaro) have administered HCQ, being cured soon</p>
Medical Freedom	<p>Physicians must prescribe whatever they believe, even without conclusive studies</p> <p>Doctors advocating for HCQ are persecuted</p> <p>The population has the right to choose early treatment</p> <p>We live in a dictatorship where HCQ cannot be used</p> <p>Without HCQ, authorities impose totalitarian lockdowns</p> <p>The doctor-patient relationship must be protected</p> <p>The population is losing its freedom, and aggressive resistance to HCQ illustrates this</p> <p>There is a plot among mainstream media, governments, institutions, and big techs (Alphabet, Meta, X) with conflicting interests to suppress, hinder, and silence the use of HCQ</p> <p>Denying early treatment may stem from ignorance or perverse motives</p> <p>Doctors, governments, and companies profit from the pandemic</p> <p>Doctors use medical authority to misinform and discredit early treatment</p> <p>Motivations against early treatment are not to save lives but for economic gains</p> <p>Deaths, disease spread, and economic destruction are neglected by authorities when deciding not to recommend early treatment</p>

Source: authors (2024).

Far-right media in Brazil portrayed hydroxychloroquine (HCQ) as scientifically valid despite lacking compelling evidence, aiming to legitimize its use in the national COVID-19 response. Behind the pro-HCQ campaigns, they sought to sustain the president's popularity by avoiding lockdowns and preventing economic crises and job losses (Kibuuka, 2020; Moura & Veronese, 2023; Campos et al., 2023; Leite et al., 2023).

Personal experiences were promoted as evidence of HCQ's effectiveness, sidelining rigorous scientific research. This emotionally charged narrative resonated with the audience, fostering trust in the drug. HCQ was also framed as a matter of personal freedom, aligning with far-right ideologies that prioritize individual liberties over collective health measures. These framings helped legitimize Bolsonaro's controversial COVID-19 policies, hinting that similar tactics could be used to justify other public health or environmental measures that contradict scientific consensus.

4. Conclusion

Far-right partisan media in Brazil constructed an alternative information ecosystem during the COVID-19 pandemic, marked by ideological framing, disinformation, and selective engagement with scientific discourse. Unproven treatments, especially hydroxychloroquine (HCQ), were consistently portrayed as legitimate, effective, and backed by science, despite the absence of compelling empirical evidence. By mobilizing the framings of "Scientific Evidence," "Personal Experience," and "Medical Freedom," the Brazilian far-right outlets legitimized the "early treatment" protocol and aligned it with broader political goals, including opposition to public health restrictions and the defense of individual liberties. This narrative strategy fragmented public understanding of the pandemic, reinforced anti-science sentiment, and contributed to the normalization of state policies that contradicted international health guidelines. The findings underscore the powerful role partisan media can play in shaping crisis perception and legitimizing policies that diverge from scientific consensus.

Mirroring dynamics observed in the United States under the Trump administration, Brazil's far-right media capitalized on the climate of uncertainty brought about by COVID-19 to advance a politically charged health framing. These outlets strategically disseminated selective and often decontextualized scientific evidence, amplified personal testimonies framed as clinical proof, and invoked the rhetoric of medical freedom to challenge institutional authority. Consequently, they sowed public doubt regarding established health protocols and fostered a false sense of scientific legitimacy around the "early treatment" protocol centered on hydroxychloroquine. This media campaign was not merely informational – it was inherently political. The framings it sustained were tightly aligned with President Bolsonaro's broader strategy of resisting restrictive health measures, downplaying the pandemic's severity, and preserving economic activity at all costs. In this context, far-right media served as both amplifier and architect of a communication agenda that subordinated scientific rigor to ideological alignment, ultimately reshaping public perception and legitimizing a pandemic response rooted in political expediency rather than evidence-based medicine.

By embedding unproven substances and treatments within emotionally resonant and politically charged framings, partisan media not only shaped public perception but also influenced national policy and undermined trust in science. The Brazilian far-right partisan media case underscores the urgent need to critically examine the role of partisan media in public health crises, particularly regarding ownership structures and editorial agendas that can distort scientific messaging. Beyond COVID-19, far-right governance in Brazil has also coincided with the erosion of environmental protections, accelerating deforestation in the Amazon, weakening institutions tasked with regulating biodiversity conservation (Rajão et al.,

2022), and undermining international climate commitments (Torico, 2023). These trends are symptomatic of a broader pattern in far-right regimes, where science denialism and anti-environmentalism often intersect with populist narratives and authoritarian policymaking. Strengthening media literacy, promoting transparency, and safeguarding the integrity of health communication are essential steps to protect democratic institutions and ensure evidence-based responses in future crises.

Large Language Models Statement

During the writing of this work, the authors used ChatGPT (chatgpt.com) and Grammarly (grammarly.com) for English language correction and readability. After reviewing, the authors take full responsibility for its content.

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