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Dangerous fanaticism in Brazil (and in the world) at the time of the COVID-19 pandemic.

Fanatismo perigoso no Brasil (e no mundo) na época da pandemia da COVID-19.

Peligroso fanatismo en Brasil (y en el mundo) en la época de la pandemia de COVID-19.

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RESUMO

Introdução: Há um crescimento de movimentos negacionistas em escala global. Durante a pandemia de coronavírus, foram divulgadas informações incorretas sobre medicamentos que supostamente apresentariam eficácia, com destaque para países governados por líderes populistas, incluindo o Brasil.

Objetivo: Analisar como movimentos de negação científica se consolidaram durante a pandemia da COVID-19.

Métodos: Foi realizada uma análise das evidências sobre a consolidação desses movimentos no Brasil, com foco na atuação de grupos em redes sociais e em setores organizados.

Resultados: No Brasil, observou-se o apoio de segmentos específicos, incluindo parte da comunidade médica, ao movimento negacionista. Identificou-se um componente de resistência à ciência e à imprensa, com reações agressivas contra posições divergentes.

Conclusão: O estudo aponta riscos associados à consolidação desse tipo de movimento no Brasil, ressaltando a necessidade de respostas organizadas por parte da sociedade para mitigar seus impactos.

Palavras-chave: Novo coronavírus; redes sociais; negacionismo; populismo

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ABSTRACT

Introduction: There has been a global rise in denialist movements. During the COVID-19 pandemic, incorrect information about purportedly effective treatments was disseminated, notably in countries led by populist leaders, including Brazil.

Objective: To analyze how scientific denial movements were consolidated during the COVID-19 pandemic.

Methods: An analysis was conducted on evidence regarding the consolidation of these movements in Brazil, focusing on the role of social media groups and organized sectors.

Results: In Brazil, specific segments, including parts of the medical community, were observed to support denialist movements. A resistance to science and the press was identified, accompanied by aggressive reactions against opposing views.

Conclusion: The study highlights the risks associated with the consolidation of such movements in Brazil and emphasizes the need for organized societal responses to mitigate their impacts.

Keywords: new coronavirus; social networks; denialism; populism

RESUMEN

Introducción: Los movimientos negacionistas están experimentando un crecimiento a escala global. Durante la pandemia de COVID-19, se difundió información incorrecta sobre medicamentos que supuestamente demostrarían eficacia, especialmente en países liderados por gobiernos populistas, incluido Brasil.

Objetivo: Analizar cómo los movimientos de negación científica se consolidaron durante la pandemia de COVID-19.

Métodos: Se realizó un análisis de las evidencias sobre la consolidación de estos movimientos en Brasil, con énfasis en la actuación de grupos en redes sociales y en sectores organizados.

Resultados: En Brasil, se observó el respaldo de segmentos específicos, incluyendo parte de la comunidad médica, al movimiento negacionista. Asimismo, se identificó un componente de resistencia hacia la ciencia y los medios de comunicación, acompañado de reacciones agresivas contra posiciones divergentes.

Conclusión: El estudio señala los riesgos asociados a la consolidación de este tipo de movimiento en Brasil, subrayando la necesidad de respuestas organizadas por parte de la sociedad para mitigar sus impactos.

Palabras-clave: nuevo coronavirus; redes sociales; negacionismo; populismo

INTRODUCTION

I received a strange message on social media, more specifically from a teacher's WhatsApp group, saying, "He suffers for us. He was stabbed because of us. He came to save the Brazilians. But it will save the world". It could be something worthy of a religious cult, but no, refers to the Brazilian President who at the time was Jair Bolsonaro (2019-2022). One can imagine that it would be something from someone very simple and humble, who was co-opted by a type of fanaticism, but this was not the case, the message came from a person with the highest level of education possible. Moreover, the message continued and got worse: "The cure is not for scientists. The cure is not for doctors. The cure is not for the governors. Bolsonaro is the cure". This incredible message came from someone connected to health, education, and science.

On the same day, another event illustrated the messianic and delirium of Brazilian society. I went into a pharmacy and took a small queue of old people, keeping my distance safe, a well-known doctor entered the queue and approached me. I walked away for obvious reasons, and he challenged me, asking me if I would believe "in this disease", I said yes, and he exalted himself, saying that this was the creation of a television channel together with a left-wing party. I insisted on the global scope of the problem, but he said he knew what he was talking about, based on years of study in medicine, and he spoke loudly under the eyes of the elderly clients, many of whom were possible or potential patients. It is unnecessary to point out the risks of what happened: in the real world, we were facing a pandemic that has the old people as the group at greatest risk, which usually trusts health professionals, especially doctors. These events took place years ago (first semester of 2020), in the initial months of the pandemic, but already signaled which path Brazil would follow in the conduct of COVID-19 under the auspices of a significant portion of the medical community (SILVA, 2021b).

These examples could be specific, the fruit of isolated daydreams, but this was not the case with Brazilian delirium (SILVA, 2021e). Other health professionals sent me messages saying that the cure had already been found, a drug (chloroquine or hydroxychloroquine) (SILVA, 2021b) indicated by the President of the USA and insistently prescribed by the Brazilian messiah (RICARD e MEDEIROS, 2020) The serious effects of this denialism were proven at the end of the pandemic period, by the demonstration that the unbridled use of this drug worsened the condition of patients and must have caused many deaths (the incredible thing is that even today, 2024, many believe that this drug would be the salvation) (ROUBAUD et al., 2020; SILVA, 2023a). One must argue why the rest of the world, including the United States, did not use it to prevent thousands of deaths. There was no logical answer, just a series of confusing speeches linked to persecution mania and conspiracy theories (HELLINGER, 2018).

METHODS

This study employed a qualitative and exploratory approach, grounded in methods of document analysis and literature review, to understand the consolidation of denialist movements in the Brazilian context during the COVID-19 pandemic. The investigation was structured into three main stages, detailed below:

Collection of documentary data and primary sources:

Official documents, scientific publications, government statements, and institutional reports related to public policies and denialist narratives during the pandemic were gathered. Primary sources, including political leaders' speeches, official notes from the Ministry of Health, and interactions on social media, were analyzed to identify discursive patterns that reinforced denialism.

Social media analysis:

A systematic analysis was conducted on groups and communities within social media platforms widely associated with scientific denialism in Brazil. Data on interactions, shares, and content related to the use of unproven medications, conspiracy theories, and attacks on scientific institutions and the press were collected. The analysis focused on identifying how these narratives were disseminated and amplified.

Review of academic literature:

A literature review was performed using databases such as PubMed, Scopus, Google Scholar, and SciELO to identify prior studies on misinformation, denialism, and the impact of populist leadership on public health. The review included studies investigating the effects of unproven medications, such as hydroxychloroquine, and the broader implications of these movements for pandemic management in Brazil and globally.

Critical data analysis:

The collected data were subjected to critical analysis based on theories of communication, political science, and social studies of science. The evidence was organized into thematic categories, enabling the assessment of interrelations between misinformation, political leadership, and scientific denialism. Data triangulation ensured the reliability and consistency of the conclusions.

Ethical considerations:

All information used in this study was obtained from publicly accessible sources, adhering to ethical research principles. No sensitive or personal data from participants were collected.

RESULTS AND DISCUSSION

Were they just small, isolated groups?

The argument that there was no definitive remedy at the time, with many treatments still under investigation (DONG et al., 2020). faced challenges in Brazil. A significant factor contributing to this challenge was the dissemination of misinformation, sometimes originating from official sources such as the Ministry of Health's website and reports from respected journalists (SILVA 2021d). Even in more developed countries, managing misinformation during the pandemic proved challenging, as highlighted by studies on global responses (JON, COHEN; KUPFERSCHMIDT, 2020).

In Brazil, a document advocating the use of an unproven drug was circulated, signed by 31 or 26 scientists (depending on the source), including a prominent chemist affiliated with the Brazilian Academy of Sciences and president of the Brazilian Society of Intelligent Design. This association, known for its controversial views on topics such as biological evolution, raised questions regarding its alignment with mainstream scientific evidence (SILVA, 2020). The rector of this chemist's university (UNICAMP) urged caution regarding the drug, consistent with international scientific standards.

The document criticized the Ministry of Health's cautious approach, arguing that safety tests could take many months and recommending immediate release of the drug. It also cited Portugal as an example, asserting that the drug was broadly used there. However, the argument overlooked that Portugal's success during the pandemic was primarily due to stringent social isolation measures, not reliance on unproven treatments (CAMPOS e LINS, 2020).

This dissemination of a document promoting unverified treatments illustrates the risks of prioritizing rapid distribution over rigorous evaluation. It also underscores the broader challenge of navigating conflicting scientific narratives during health crises.

The document was published on a website run by an astrologer, a controversial figure who had been an influential mentor to some political leaders in Brazil and had previously disseminated claims, such as denying the existence of the pandemic and promoting xenophobic conspiracy theories(SILVA, 2021; STEFANONI, 2019), . These narratives, amplified through social media, contributed to public confusion and hindered coordinated pandemic responses.

Globally, many treatments and vaccines were undergoing rigorous evaluation(DHAMA et al., 2020; LURIE et al., 2020). In Brazil, however, the promotion of unproven treatments, including the so-called "COVID kit," led to widespread use without demonstrated efficacy. This approach resulted in adverse outcomes, including an increased mortality rate above the global average(FURLAN e CARAMELLI,

2021; SANTOS-PINTO et al., 2021), a cocktail of various medicines (SILVA, 2021f), from anthelmintics to anti-neoplastics, which has certainly only worsened patients' health (SILVA, 2023a).

More than a year after these treatments were promoted, studies revealed that their use had no measurable benefit. On the contrary, the indiscriminate use of some drugs, such as chloroquine, likely exacerbated patients' conditions(HENTSCHKE-LOPES et al., 2022). Despite this, no formal acknowledgment of error was made by the scientists who endorsed these treatments, highlighting the need for greater accountability in health communications.

This case illustrates how misinformation, even when disseminated by credentialed individuals or groups, can contribute to public health challenges. It underscores the necessity of adhering to evidence-based practices and maintaining a cautious approach in the face of scientific uncertainty.

Short memory

The debate surrounding the efficacy of chloroquine as a treatment for COVID-19 gained global attention in March 2020 when the American president suggested it as a potential cure(FERNER & ARONSON, 2020). However, subsequent data showed that the drug did not prevent the infection of an additional 800,000 individuals nor the death of more than 44,000 people, which at the time represented one-quarter of global fatalities (as of April 21, 2020). The United States emerged as the global epicenter of the pandemic during this period, underscoring the need for robust scientific validation before promoting treatments.

In contrast to Brazil, the American government eventually revised its public health strategy, emphasizing measures such as social isolation. However, misinformation about chloroquine continued to spread in Brazil, gaining traction through social media and support from parts of the medical community. This demonstrates the challenges of combating misinformation, even within professional and institutional spaces.

Investigate

Brazilian researchers have emphasized the importance of rigorous scientific evaluation before adopting treatments, particularly those with potential side effects(SILVA, 2024a). For instance, studies indicate that chloroquine may cause severe cardiac complications(PRADELLE et al., 2024). These risks highlight the complexities of determining the appropriate use of such treatments, especially for patients in non-critical conditions.

Despite these concerns, discussions about the potential risks of chloroquine were not prominently addressed by the Brazilian government during the pandemic. Instead, official communications often emphasized anecdotal evidence or unverified claims. For example, a high-ranking official publicly questioned the safety of vaccines — contrary to expert consensus(YONG et al., 2022)) — and temporarily suspended vaccination campaigns for adolescents, which contributed to public uncertainty and hesitancy.

The broader effects of such anti-vaccine narratives persist in 2024 (SILVA, 2024d). Social media discussions often attribute cases of cardiac events among younger individuals to COVID-19 vaccines, despite evidence pointing to other causes, such as underlying conditions (REID et al., 2006), climate change-induced cardiovascular risks(ROSSATI, 2017); and long-term effects of COVID-19 itself (CHIDAMBARAM et al., 2022; MOHAMMAD et al., 2022). This misinformation has impacted vaccination rates, not only for SARS-CoV-2 but also for other diseases, creating public health challenges (DOMINGUES et al., 2023; WEISSMANN e RICHTMANN, 2023). Efforts to reverse this decline face significant obstacles (FERNANDES et al., 2024).

Research Challenges

Studies conducted in Brazil further examined the safety and efficacy of chloroquine, adhering to established research protocols. Unfortunately, these studies encountered adverse outcomes, including patient fatalities among those in critical conditions, which led to the suspension of trials for safety reasons (BORBA et al, 2020). While adverse outcomes are not uncommon in high-risk clinical trials

(TIAN et al, 2020), these events became a focal point for criticism and controversy.

Researchers who reported potential risks faced significant backlash, including online harassment and threats. This underscores the increasing polarization surrounding public health debates in Brazil during the pandemic. The dissemination of misinformation often framed these researchers as politically motivated, further complicating efforts to maintain scientific integrity.

In 2024, such dynamics remain prevalent, particularly concerning vaccination. Social media continues to serve as a platform for the dissemination of misinformation, often targeting individuals or institutions that oppose unverified treatments(XAVIER et al, 2024). Moreover, some media outlets with significant online presence have adopted editorial lines that perpetuate misinformation and counteract public health initiatives(SILVA, 2023c, 2024b).

Reverie

Instances of misinformation persisted throughout the pandemic, including examples from professionals in the healthcare field. On April 23, 2020, a widely circulated message on social networks claimed that only one COVID-19-related death had occurred in Brazil within the previous 24 hours, allegedly due to changes in governmental data transparency policies. This raises important questions about the reach and impact of such claims, particularly when disseminated by individuals associated with healthcare fields(CAVALCANTI, 2024; HELLMANN e HOMEDES, 2023)?

On the same day, a prominent journalist aligned with government positions publicly criticized the dismissal of chloroquine as a potential COVID-19 treatment. The journalist argued that the rejection of the drug stemmed from unwarranted caution rather than a substantive evaluation of its risks. **This narrative** conflicted with prevailing scientific evidence highlighting the absence of efficacy and the potential dangers of its widespread use. Notably, this discourse occurred as Brazil reported its highest daily death toll up to that point, with 407 fatalities recorded, based on official government data.

These contrasting realities—unsubstantiated claims versus official statistics—illustrate the challenges posed by misinformation in undermining public trust and decision-making during a public health crisis. The dissemination of inaccurate or misleading narratives, especially by influential figures, underscores the importance of transparent, evidence-based communication to counter misinformation effectively.

Recurrence

It can be argued that the intent behind the endorsement of chloroquine by the Brazilian president was to offer a solution during a time of crisis. This perspective frames the initiative as a courageous move against mainstream opinions. However, the episode reflects a pattern of decisions that have faced significant criticism for lacking scientific substantiation. This pattern is not unprecedented, as a similar situation occurred during the political career of the president, specifically in 2016, when he supported the release of phosphoethanolamine, popularly referred to as the "cancer pill"(CASARÕES e MAGALHÃES, 2023).

The "cancer pill" case demonstrated parallels with the later promotion of chloroquine. In both instances, there was no robust scientific evidence supporting the efficacy of the treatments. As with chloroquine, medical professionals, including the then-Minister of Health, raised concerns about phosphoethanolamine due to its lack of clinical testing and absence of regulatory approval by the National Health Surveillance Agency (Anvisa) (BUSCATO et al., 2015). Despite these concerns, political figures endorsed its immediate release, bypassing scientific norms and regulatory frameworks(SILVA, 2023b).

A pivotal moment in the discussion surrounding phosphoethanolamine occurred in the Brazilian National Congress. The then-federal deputy, who would later become president, defended the drug's release with an emotional appeal: “Cancer has no party. The cancer party is the cemetery. Desperate people are watching us now. I doubt that anyone here does not have a relative or a friend afflicted with this disease. We can now give hope to these people. (...) Worse than a bad decision is an

indecision." This rhetoric underscores the tension between populist appeals and evidence-based policymaking(STEA, 2024).

The opposition to this approach came from medical professionals, including another federal deputy who later served as Minister of Health. He emphasized the risks associated with circumventing scientific protocols, stating: "The way this issue is addressed is extremely dangerous to do science. We are reducing this debate to whom is in favor of curing cancer and who is against it. (...) You cannot release a substance without knowing its collateral effect, dosage, or the type of cancer it would eventually be indicated for." Despite these warnings, the political momentum prevailed, and the drug was released without proper evaluation.

Adding to this debate, another deputy, the son of the future president, made a controversial analogy, asserting: "Gentlemen, the question is simple: these people are going to die in a week, in a month. If you or someone in your family had cancer and someone said that battery water in the vein heals, everyone would take it. Now, phosphoethanolamine is much better than that: a survival." This statement exemplifies the type of discourse that prioritizes immediate emotional appeals over scientific rigor.

The recurrence of these scenarios highlights a broader challenge: balancing urgent public health responses with adherence to established scientific and regulatory processes. The phosphoethanolamine and chloroquine episodes serve as case studies in understanding the consequences of politicizing health decisions and bypassing evidence-based frameworks (THE LANCET, 2020).

Returning to the Present

Evidence demonstrates that the use of chloroquine(PONCELET et al, 2023))as a treatment for COVID-19 was ultimately ineffective. Despite this, numerous patients abandoned evidence-based treatments to pursue alternatives that lacked scientific validation. By the end of the pandemic period in 2022, Brazil was relying on the so-called "COVID kit," a combination of 15 to 20 drugs administered even as a preventive measure. These drugs, often prescribed by a subset of Brazilian doctors, failed to demonstrate efficacy and, in some cases, potentially worsened patients' conditions due to unnecessary exposure to harmful medications.

During this time, two health ministers, both physicians, were dismissed after opposing the use of chloroquine within the Bolsonaro administration(DE OLIVEIRA ANDRADE, 2023). They were replaced by a military official who adhered to the directives of the federal government, which emphasized the promotion of chloroquine despite the lack of supporting evidence. Later, the Ministry of Health was led by another physician who adopted inconsistent public health positions, alternately endorsing vaccines or masks and at times opposing them, depending on political alignment with the president(RAZAFINDRAKOTO et al., 2024).

As of 2024, Brazil has reported approximately 700,000 deaths from COVID-19. The widespread use of unproven treatments contributed minimally, if at all, to mitigating the pandemic's impact. These outcomes underline the critical gap between political messaging and scientifically grounded public health strategies. Misinformation regarding treatments like chloroquine and comparisons to earlier unverified remedies, such as the so-called "cancer pill," reveal the challenges posed by the promotion of unproven solutions during health crises.

Is it an exaggeration?

It may seem excessive to emphasize isolated events or to suggest that populist governments amplify achievements. However, examples from recent history highlight the serious consequences of misinformation and irresponsible medical prescriptions during the pandemic.

In Iran, one of the countries most affected by COVID-19, misinformation disseminated through social networks claimed that toxic methanol could be effective against the virus (SOLTANINEJAD, 2020). Methanol, a known poison, caused hundreds of deaths, left a child blind, and resulted in over a thousand hospitalizations, further straining the country's health system. This episode underscores the

dangers of unchecked misinformation in critical public health contexts.

The spread of misinformation was not confined to Iran. In the United States, following a presidential statement touting chloroquine as a potential treatment for COVID-19, an elderly couple in Arizona attempted to self-medicate using chloroquine phosphate, a chemical used to clean aquariums. Tragically, this decision resulted in the man's death and the hospitalization of his wife in serious condition (MÉGARBANE, 2020). This incident illustrates the unintended consequences of authoritative figures endorsing unproven treatments without caution.

Another notable event occurred in April 2020, when the U.S. President speculated that disinfectants, known to kill the virus on surfaces, might be explored as a treatment inside the human body (YAMEY e GONSALVES, 2020). This statement, amplified by social networks, led to numerous individuals attempting to ingest disinfectants, resulting in emergency hospitalizations. Although the president later characterized the statement as sarcasm, the damage was already done. Hospitals, particularly in New York, already overwhelmed by COVID-19 cases, faced additional strain due to these incidents (ORSO et al., 2020).

In contrast to these countries, where denialism surrounding ineffective treatments was eventually overcome, Brazil continued to promote unproven therapies such as chloroquine throughout the pandemic. This persistent reliance on ineffective drugs is one factor that may explain the country's elevated COVID-19 mortality rate compared to other nations (RANZANI et al., 2021).

Social media companies played a role in attempting to curb misinformation. Platforms actively removed posts claiming that chloroquine was a definitive cure for COVID-19 (LIMAYE et al., 2020). These actions highlight the tension between preventing public harm and balancing freedom of expression. Companies may have acted out of a sense of legal liability for the consequences of amplifying dangerous misinformation. This raises broader questions about accountability, not only for social media platforms but also for political leaders whose statements significantly influence public perceptions and behaviors.

The ability of misinformation to spread, even when monitored by large platforms, demonstrates the scale of the challenge. Both social media companies and political authorities faced scrutiny for their roles in shaping public health narratives. The responsibility to protect populations from harm while addressing the root causes of misinformation remains an ongoing and critical issue in managing future health crises (SILVA, 2024c).

Fanaticism Extended Beyond Medicine

During the pandemic, public demonstrations emerged in Brazil in support of the president's policies, often in direct opposition to the recommendations of the World Health Organization and international public health guidelines advocating for social isolation(DYER, 2020). These demonstrations included participants from economically and educationally advantaged segments of society. Brazil became part of the so-called "Alliance of Ostriches," a group of four countries—Brazil, Nicaragua, Belarus, and Turkmenistan—that downplayed the seriousness of the pandemic(BELLO, 2020). The movement's stance included not only denial of scientific recommendations but also calls for authoritarian governance. This paradoxical behavior contrasts with typical protests that challenge, rather than advocate for, the imposition of a dictatorship.

The culmination of this ideological fervor was observed during the attempted coup d'état in January 2023, which was reportedly fueled by misinformation and the rhetoric of political leaders. The incident highlighted how misinformation and extremism, amplified by social networks, can drive collective actions that defy democratic principles.

The sociopolitical environment surrounding these events raises concerns about the characteristics of movements that resist established scientific and democratic norms. Research on authoritarian tendencies identifies markers such as exaggerated nationalism(GREGOR, 2017), distrust of legislative and judicial systems, fixation on conspiracy theories (EATWELL, 2011), glorification of leaders as heroic figures, and rejection of scientific and intellectual advancements(ECO, 2018). Additionally, studies

suggest that these movements often intertwine with militant religiosity, which can heighten their intensity and resistance to external critique (FUNARI, 2022).

To understand the dynamics of such behavior, historical parallels may be drawn. For instance, the adherence to leaders and ideologies despite clear evidence of harm reflects patterns observed in other contexts of authoritarianism and social manipulation. A metaphor often cited in this regard is the behavior of lemmings, which are believed to blindly follow one another, even to their detriment(CHITTY, 1996). While the biological accuracy of this metaphor is debated, it serves as an illustrative comparison for the collective actions driven by uncritical allegiance to leadership.

The return to in-person school attendance early in the pandemic, despite scientific advice cautioning against such measures, exemplifies decisions influenced by ideological rather than evidence-based considerations. This approach led to increased risks for vulnerable populations, particularly children and their families.

These patterns are not limited to public health but extend to environmental policy. Brazil's approach to environmental preservation under the same administration faced significant criticism for its alignment with short-term economic interests and disregard for scientific evidence on climate change (SILVA, 2021). Despite the availability of extensive research on the adverse effects of environmental degradation, misinformation disseminated through social networks continued to shape public opinion and policy, further complicating efforts to address the global climate crisis.

In analyzing these trends, it becomes evident that the intersection of misinformation, political ideology, and public behavior poses significant challenges to both governance and societal well-being. Effective strategies to counteract such phenomena require a focus on improving scientific literacy, combating misinformation, and reinforcing democratic values.

FINAL CONSIDERATIONS

This analysis began with events involving the dissemination of information on social networks during the pandemic, which may initially seem disconnected from broader historical phenomena. However, the trajectory of misinformation regarding unproven COVID-19 treatments reveals significant parallels with patterns of collective behavior and ideological adherence. For example, chloroquine and similar drugs, which lacked demonstrated efficacy, continued to be promoted by political leaders, including public endorsements at forums such as the United Nations General Assembly(SILVA, 2021c). Despite these claims, the drugs failed to mitigate the pandemic's impact, and public support for these narratives persisted. Notably, almost half of the Brazilian electorate voted for Bolsonaro in his campaign against Lula(TANSCHEIT e BARBOSA, 2023), with many supporters continuing to endorse his positions, even in the context of events like the attempted coup d'état in January 2023(CAFFAGNI et al., 2024).

The reluctance of certain groups to acknowledge errors in endorsing ineffective treatments underscores a persistent challenge. The absence of retractions from Brazilian scientists who supported such drugs, journalists who disseminated the claims, and segments of the medical community has contributed to sustained misinformation. Furthermore, institutions like the Federal Council of Medicine have been criticized for maintaining positions that, while ostensibly neutral, have been perceived as implicitly supporting the use of unproven therapies, including anthelmintics and antibiotics (FURLAN e CARAMELLI, 2021; SILVA, 2021a)

It is crucial for different sectors of society—both in Brazil and globally—to adopt proactive measures to counteract these trends. History offers numerous lessons about the dangers of failing to address ideologically driven fanaticism. For instance, the delayed recognition of early warning signs of extremism in Europe allowed harmful ideologies to gain momentum, with devastating consequences(LIPSTADT, 2016). Today, online platforms continue to host narratives denying historical atrocities, such as the Holocaust, perpetuating dangerous myths that find considerable audiences.

In addressing the current challenges, the focus must remain on mitigating the direct impact of

the COVID-19 pandemic while also confronting the ideological movements that have exacerbated its effects. In countries like Brazil, the fight against populist misinformation and its broader societal implications remains as critical as the fight against the virus itself. Both battles require concerted efforts grounded in evidence-based practices, public awareness, and the reinforcement of democratic values. As the pandemic wanes, the symbolic decline of chloroquine as a "miracle cure" may serve as a reminder of the importance of scientific integrity and the risks posed by unchecked misinformation.

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