

# Medical Misinformation and Unproven COVID-19 Treatments in Brazil: Analyzing the Impact of Misguided Health Policies

<sup>1,2</sup>Hesley Silva

<sup>1</sup>Department of Science and Education, State University of Minas Gerais, Ibirité, Brazil

<sup>2</sup>Department of Science, Health and Education, University Center of Formiga, Formiga, Brazil

## ABSTRACT

**Background and Objective:** Brazil has faced a phenomenon that requires detailed analysis, during the COVID-19 pandemic. The federal government's chaotic response, including the promotion of risky behaviors and unproven treatments, created a turbulent public health environment. Many Brazilian doctors prescribed drugs such as hydroxychloroquine and ivermectin without scientific evidence, despite public trust in medical professionals. This study aims to understand the spread of medical misinformation and the inappropriate use of medicines in Brazil. **Materials and Methods:** Using a qualitative analysis of secondary sources, including scientific articles, public health reports and first-hand accounts, the study investigated the extent and impact of medical misinformation and the use of unproven treatments. **Results:** The findings indicate that many doctors have misinterpreted the benign progression of COVID-19, promoting ineffective treatments. This has exacerbated public health challenges, resulting in unnecessary risks and higher mortality rates. Brazil has faced a serious health crisis, exacerbated by the continued advocacy of unproven treatments. **Conclusion:** The study highlights the urgent need for evidence-based health policies, clear communication from health authorities and ethical responsibility from doctors to avoid similar outcomes in future health emergencies.

## KEYWORDS

Medical misinformation, health policies, infodemic, misconduct, Brazil, COVID-19

*Copyright © 2024 Hesley Silva. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.*

## INTRODUCTION

A phenomenon that still needs to be explained occurred in Brazil during the COVID-19 pandemic. While the federal government continued its chaotic confrontation with the SARS-CoV-2 virus, endorsing risky behavior and conducting a disorganized vaccination campaign in early 2021<sup>1</sup>. A significant proportion of Brazilian doctors endorsed part of this chaos, publicizing, supporting and prescribing drugs without any scientific evidence. The issue was much more serious than it might seem because, despite the growing distrust of the Brazilian population towards the government, doctors enjoyed prestige and were a reliable source for lay people in the health field.

During the COVID-19 pandemic, a peculiar and alarming phenomenon occurred in Brazil, which still needs a detailed explanation. The federal government, under the leadership of Jair Bolsonaro, adopted a chaotic



and often contradictory approach to tackling the SARS-CoV-2 virus. This approach has included promoting risky behaviors, such as minimizing the severity of the disease, rejecting social distancing measures and advocating unproven treatments. In addition, the vaccination campaign in early 2021 was marked by disorganization and a lack of central coordination, which hampered the effectiveness of the fight against the pandemic<sup>2</sup>.

Parallel to this chaotic management, a significant proportion of Brazilian doctors endorsed and amplified this chaos, publicizing, supporting and prescribing drugs without any proven scientific basis. Medicines such as hydroxychloroquine, ivermectin and azithromycin were promoted and prescribed as effective treatments against COVID-19, despite the lack of scientific evidence to support their efficacy<sup>3,4</sup>. The issue became even more serious when one considered the trust and prestige that doctors enjoyed among the population. In a context where distrust of the government was on the rise, the voice of doctors remained one of the most trusted by the lay population in health matters.

The spread of medical misinformation by health professionals has raised significant concerns about the ethics and responsibility of doctors in times of crisis. Studies indicate that prescribing unproven treatments not only fails to offer therapeutic benefits but also exposes patients to unnecessary risks, potentially worsening the public health situation. The situation in Brazil has revealed a complex puzzle, where the interaction between misguided government policies and the actions of part of the medical community has contributed to a scenario of misinformation and extreme vulnerability.

The purpose of this study is to critically examine the extent and impact of medical misinformation and the inappropriate use of unproven treatments during the COVID-19 pandemic in Brazil. By analyzing the interplay between government policies and the actions of the medical community, this research aims to shed light on how these factors contributed to the exacerbation of the public health crisis. Ultimately, the study seeks to provide insights that will inform future health policies and reinforce the importance of evidence-based medical practices in preventing similar outcomes in future health emergencies.

## **MATERIALS AND METHODS**

This study is based on a qualitative analysis of secondary sources, including scientific articles, public health reports, news and testimonials from health professionals. The research was carried out from January, 2022 to December, 2023, to understand the spread of medical misinformation and the inappropriate use of medicines during the COVID-19 pandemic in Brazil. The sources were carefully selected to cover a variety of perspectives, ranging from official bodies to firsthand accounts from frontline professionals, ensuring a comprehensive understanding of the issue.

## **RESULTS**

The data indicates that a significant portion of the Brazilian medical community, between a third and a half depending on the source, had difficulty understanding that COVID-19 had a reasonably benign evolution for most patients. Research since the beginning of the pandemic indicated that mortality was low in relation to the large number of infected people. The problem was a large number of infected people, so any placebo or innocuous medication could be interpreted as a miracle drug by the unwary. One example was the use of antibiotics in Brazil, which were considered viable and effective against the disease, without any scientific logic, as they should be prescribed against bacteria, not viruses. However, many Brazilian doctors continued to prescribe them against SARS-CoV-2, even with the inherent risks of inadequate medicine, which could lead to bacterial resistance.

The COVID-19 disaster and the deaths in Brazil continued, with the indication in several cities of a well-known COVID-19 kit (hydroxychloroquine, ivermectin and azithromycin, among others). None of the drugs had been proven to be effective against the SARS-CoV-2 virus, but their possible side effects were known. It was incredible to imagine that prescribing something not provided for in the package leaflet had

become commonplace in the country. Some medical associations and exponents of Brazilian medicine were against this unique behavior, however, the Federal Council of Medicine maintained an ambiguous stance, neither recommending nor condemning the use of the cocktail of ineffective drugs, pointing to a strange freedom in the relationship between doctor and patient, which would include putting the patient at risk without any benefit about the disease.

## **DISCUSSION**

The nebulization of hydroxychloroquine and preventive treatments for a viral disease using dewormers, malaria drugs and even cancer drugs such as ivermectin are tragic examples of an unwise approach adopted by part of the Brazilian medical community during the COVID-19 pandemic. Scientific studies showed that hydroxychloroquine was ineffective against COVID-19 and, in addition, posed the risk of serious side effects, such as cardiac arrhythmias<sup>5</sup>. Likewise, ivermectin, although effective against parasites, has not shown significant clinical benefit in the treatment of COVID-19 and has been advised against by the manufacturer itself for this purpose<sup>6</sup>, even cases of parasite resistance to this important drug have been reported in the post-pandemic period.

The practice of prescribing potent drugs, originally developed for other diseases, has exposed healthy patients to unnecessary risks of side effects, without any guarantee of efficacy in combating SARS-CoV-2. This practice not only increased the vulnerability of patients but also diverted critical medical resources that could have been better spent on evidence-based treatments<sup>7</sup>.

At the end of March, 2021, Brazil faced a new pandemic wave, exacerbated by a mutant variant of the virus, resulting in crowded ICUs and the collapse of the health system. In this context, the continuation of treatments without scientific proof not only failed to mitigate the crisis but also worsened the situation. Doctors who opposed these irrational practices faced threats and intimidation in certain municipalities, creating an environment of fear and insecurity among health professionals. Proof of this irrationality emerged later when it was shown that the municipalities that aligned themselves with the practices spread by the Bolsonaro government and like-minded doctors had proportionally more deaths than those that did not. This negative alignment had its effect not only on COVID-19 but also on many vaccination rates<sup>8</sup>.

At the same time, the Brazilian population, already confused and disoriented, didn't know who to trust. The effective (and often misinformative) communication of "kit covid" advocates on social media, aligned with the Bolsonaro government, further undermined public trust in proven measures such as lockdown and social distancing<sup>9</sup>. The dissemination of false information and the promotion of ineffective treatments have resulted in high mortality that could have been avoided.

Brazil, with only 3% of the world's population, recorded around 10% of COVID-19 deaths globally, an alarming figure that highlighted the catastrophic failure of public health policies and management of the pandemic. Studies indicate that approximately 400,000 of the 700,000 COVID-19 deaths in Brazil could have been avoided if evidence-based medical practices and adequate prevention measures had been adopted<sup>10</sup>.

## **CONCLUSION**

Brazil's COVID-19 response exposed severe disorganization, misinformation and the misuse of medicines, worsening the public health crisis. The reliance on unproven treatments and lack of clear guidance led to a vulnerable, disoriented population and an overburdened health system. This situation underscores the critical need for evidence-based policies, transparent communication and ethical medical practices to enhance resilience against future health emergencies.

## SIGNIFICANCE STATEMENT

This study was necessary to address the critical issue of medical misinformation during the COVID-19 pandemic in Brazil, particularly the widespread endorsement of unproven treatments by healthcare professionals. By analyzing the extent and impact of these practices, the research highlights the urgent need for evidence-based health policies and ethical responsibility among medical professionals. The study uniquely contributes to understanding how misinformation and misguided health policies exacerbated the public health crisis in Brazil, resulting in unnecessary risks, higher mortality rates and a deeply divided society.

## ACKNOWLEDGMENT

The author would like to thank UNIFORMG, its research center, CEPEP and CNPq for supporting the research that made it possible to produce and publish this text.

## REFERENCES

1. Silva, H.M., 2022. The (in)competence of the Bolsonaro government in confronting coronavirus disease 2019 (COVID-19). *Infect. Control Hosp. Epidemiol.*, Vol. 43. 10.1017/ice.2021.431.
2. Victora, C.G., M.C. Castro, S. Gurzenda, A.C. Medeiros, G.V.A. França and A.J.D. Barros, 2021. Estimating the early impact of vaccination against COVID-19 on deaths among elderly people in Brazil: Analyses of routinely-collected data on vaccine coverage and mortality. *eClinicalMedicine*, Vol. 38. 10.1016/j.eclinm.2021.101036.
3. Axfors, C., A.M. Schmitt, P. Janiaud, J. van't Hooft and S. Abd-Elsalam *et al.*, 2021. Mortality outcomes with hydroxychloroquine and chloroquine in COVID-19 from an international collaborative meta-analysis of randomized trials. *Nat. Commun.*, Vol. 12. 10.1038/s41467-021-22446-z.
4. Silva, H.M., 2022. Antibiotics against viruses: Brazilian doctors adrift. *Infect. Control Hosp. Epidemiol.*, 43: 1992-1993.
5. Silva, H.M., 2024. Challenges and reflections on pandemic disinformation: The case of hydroxychloroquine and the implications for global public health. *Value Health Reg. Issues*, Vol. 43. 10.1016/j.vhri.2024.101005.
6. Hernandez, A.V., A. Liu, Y.M. Roman, P.A. Burela and V. Pasupuleti *et al.*, 2024. Efficacy and safety of ivermectin for treatment of non-hospitalized COVID-19 patients: A systematic review and meta-analysis of 12 randomized controlled trials with 7,035 participants. *Int. J. Antimicrob. Agents*, Vol. 64. 10.1016/j.ijantimicag.2024.107248.
7. Ashirmetov, A.K., 2023. Pharmacotherapeutic treatment strategies COVID-19: Lessons learned and perspectives. *Explor. Res. Hypothesis Med.*, 8: 36-47.
8. Razafindrakoto, M., F. Roubaud, M.R. Castilho, V. Pero and J. Saboia, 2024. Investigating the '*Bolsonaro effect*' on the spread of the COVID-19 pandemic: An empirical analysis of observational data in Brazil. *PLoS ONE*, Vol. 19. 10.1371/journal.pone.0288894.
9. Santos-Pinto, C.D.B., E.S. Miranda, C.G.S. Osorio-de-Castro, 2021. "Kit-covid" and the popular pharmacy program in Brazil. *Rep. Public Health*, Vol. 37. 10.1590/0102-311X00348020.
10. Kupek, E., 2024. Avoidable COVID-19-related deaths and hospitalizations in Brazil, 2020-2023. *Vaccine*, 42: 3437-3444.