Original Article

EFFECTS OF GOVERNMENT DECREES ON COVID-19 MORTALITY RATES IN SOUTHERN BRAZIL

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Abstract

Introduction: The COVID-19 pandemic is a global challenge, marked by uncertainties in prevention and therapeutic management. Objective The objective of this study was to investigate the effects of government decrees on institutional, organizational, governance and political factors (IOGP) that occurred during the pandemic period in Brazil and how the states in the South region managed the different factors. Methods: Retrospective case studies were conducted using data from state and national health websites in 2020-2021. Data on cases, mortality and recoveries relating to the population of the Southern Region during the spread of the pandemic were analyzed. Results: The results revealed different dynamics of COVID-19 in the states of the Southern region, often marked by limited commitment from both the population and state authorities. As cases fell, restrictions were eased, promoting a return to normality. Analysis of the determinants of COVID-19 highlighted the interplay between unemployment,
education, and state-specific policies. Factors such as inadequate sanitation, limited access to education and healthcare, crowded public transport and challenges associated with isolation have contributed to the transmission of the virus. **Conclusion:** The effect of government decrees during the COVID-19 pandemic in southern Brazil demonstrated the intricate relationship between policy implementation and its far-reaching consequences. This research also highlighted the complexities of managing a pandemic within a decentralized governance framework, shedding light on the interaction between government decrees, institutional dynamics and the implementation of public health strategies.

**Keywords:** COVID-19, pandemic, institutional, organizational, crisis management

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### Article original

**EFFETS DES DECRETS GOUVERNEMENTAUX SUR LES TAUX DE MORTALITE DUS AU COVID-19 DANS LE SUD DU BRESIL**

**Abstract**

**Introduction:** La pandémie de COVID-19 constitue un défi mondial, marqué par des incertitudes en matière de prévention et de prise en charge thérapeutique. **Objectif:** Cette étude visait à étudier les effets des décrets gouvernementaux sur les facteurs institutionnels, organisationnels, de gouvernance et politiques (IOGP) qui ont influencé la prise de décision, ainsi que la sélection et la mise en œuvre ultérieures d'interventions de santé publique visant à gérer l'impact du COVID-19. **Méthodes** Des études de cas rétrospectives ont été menées à l’aide de données provenant de sites Web de santé étatiques et nationaux en 2020-2021. Les données sur les cas, la mortalité et les guérisons relatives à la population de la région Sud au cours de la propagation de la pandémie ont été analysées. **Résultats:** Les résultats ont révélé différentes dynamiques du COVID-19 dans les États de la région Sud, souvent marquées par un engagement limité de la part de la population et des autorités étatiques. À mesure que les cas diminuaient, les restrictions ont été assouplies, favorisant un retour à la normale. L’analyse des déterminants du COVID-19 a mis en évidence l’interaction entre le chômage, l’éducation et les politiques spécifiques aux États. Des facteurs tels qu’un assainissement inadéquat, un accès limité à l’éducation et aux soins de santé, des transports publics bondés et les défis associés à l’isolement ont contribué à la transmission du virus. **Conclusion:** L’effet des décrets gouvernementaux pendant la pandémie de COVID-19 dans le sud du Brésil a démontré la relation complexe entre la mise en œuvre des politiques et leurs conséquences à grande échelle. Cette recherche a également mis en évidence les complexités de la gestion d’une pandémie dans un cadre de gouvernance décentralisé, mettant en lumière l’interaction entre les décrets gouvernementaux, la dynamique institutionnelle et la mise en œuvre de stratégies de santé publique.

**Mots-clés:** COVID-19, pandémie, institutionnel, organisationnel, gestion de crise.
**Artículo original**

**EFECTOS DE LOS DECRETOS GUBERNAMENTALES SOBRE LAS TASAS DE MORTALIDAD POR COVID-19 EN EL SUR DE BRASIL**

**Resumen**

**Introducción:** La pandemia de COVID-19 es un desafío global, marcado por incertidumbres en la prevención y el manejo terapéutico. **Objetivo:** Este estudio tuvo como objetivo investigar los efectos de los decretos gubernamentales sobre los factores institucionales, organizativos, de gobernanza y políticos (IOGP) que ocurrieron durante el periodo de la pandemia en Brasil y cómo los estados de la región Sur gestionaron los diferentes factores. **Métodos:** Se realizaron estudios de casos retrospectivos utilizando datos de sitios web de salud estatales y nacionales en 2020-2021. Se analizaron datos de casos, mortalidad y recuperaciones de la población de la Región Sur durante la propagación de la pandemia. **Resultados:** Los resultados revelaron diferentes dinámicas de la COVID-19 en los estados de la región Sur, muchas veces marcadas por un compromiso limitado tanto de la población como de las autoridades estatales. A medida que disminuyeron los casos, se suavizaron las restricciones, promoviendo el regreso a la normalidad. El análisis de los determinantes de la COVID-19 destacó la interacción entre el desempleo, la educación y las políticas estatales específicas. Factores como el saneamiento inadecuado, el acceso limitado a la educación y la atención sanitaria, el transporte público abarrotado y los desafíos asociados al aislamiento han contribuido a la transmisión del virus. **Conclusión:** El efecto de los decretos gubernamentales durante la pandemia de COVID-19 en el sur de Brasil demostró la intrincada relación entre la implementación de políticas y sus consecuencias de largo alcance. Esta investigación también destacó las complejidades de gestionar una pandemia dentro de un marco de gobernanza descentralizada, arrojando luz sobre la interacción entre los decretos gubernamentales, la dinámica institucional y la implementación de estrategias de salud pública. **Palabras clave:** COVID-19, pandemia, institucional, organizacional, gestión de crisis.

**Artigo Original**

**EFEITOS DOS DECRETOS GOVERNAMENTAIS NAS TAXAS DE MORTALIDADE POR COVID-19 NO SUL DO BRASIL**

**Resumo**

**Introdução:** A pandemia de COVID-19 é um desafio global, marcado por incertezas na prevenção e manejo terapêutico. **Objetivo:** Este estudo teve como objetivo investigar os efeitos dos decretos governamentais sobre os fatores institucionais, organizacionais, de governança e políticos (IOGP) ocorridos durante o período pandêmico no Brasil e como os estados da região Sul administraram os diferentes fatores. **Métodos:** Foram realizados estudos de caso...
retrospectivos utilizando dados de sites de saúde estaduais e nacionais em 2020-2021. Foram analisados dados de casos, mortalidade e recuperados relativos à população da Região Sul na propagação da pandemia. **Resultados:** Os resultados revelaram diferentes dinâmicas da COVID-19 nos estados da região Sul, muitas vezes marcadas por comprometimento limitado tanto da população quanto das autoridades estaduais. À medida que os casos diminuíram, as restrições foram atenuadas, promovendo o regresso à normalidade. **Conclusão:** O efeito dos decretos governamentais durante a pandemia da COVID-19 no sul do Brasil demonstrou a intrincada relação entre a implementação de políticas e suas consequências de longo alcance. Esta investigação também destacou as complexidades da gestão de uma pandemia num quadro de governação descentralizada, lançando luz sobre a interacção entre decretos governamentais, dinâmicas institucionais e a implementação de estratégias de saúde pública.

**Palavras-chave:** COVID-19, pandemia, institucional, organizacional, gestão de crises
Introduction

The global challenge presented by the COVID-19 pandemic has introduced numerous uncertainties in terms of prevention and therapeutic management. Despite the increasing body of literature on health interventions and outcomes, few studies provide comprehensive insights into the outcomes within their specific institutional and governmental contexts. Traditional research on the public health response to COVID-19 typically includes: (a) Understanding the epidemiology of the infection and its progression to severe illness and mortality. (b) Recommending and implementing a range of interventions for populations, encompassing both social public health measures and clinical interventions. (c) Assessing the impact of these interventions on health outcomes.

However, a recent examination of the existing public health structures for evaluating epidemic responses has identified five critical "lines of analysis" (JENEI et al., 2020). Among these, few, if any, frameworks offer a holistic interpretation of "context analysis," which has prompted the proposal for a case study in the Southern region of Brazil. Numerous "upstream" or contextual factors are believed to shape the effectiveness of the public health response, both in terms of utilizing scientific evidence to guide action and in persuading the population to adhere to recommendations. Therefore, the primary focus of this study is on the two-year period of the pandemic in the Southern region of Brazil, spanning from March 2020 to February 2022.

According to the census, 85% of the population in the South region resides in urban areas, with a significant demographic concentration in the metropolitan regions of the three capital cities. In the extreme south of Rio Grande do Sul, intensive livestock farming is prevalent, featuring high technological use but low labor demand, resulting in low demographic density (FRANCISCO, 2021). Another noteworthy sociodemographic factor in the Southern region is the significant decline in the birth rate observed in recent years.

The Southern region encompasses approximately 564 thousand square kilometers, representing 7% of Brazil's total land area. Its population numbers 29,975,984 inhabitants, making it the country's third most populous region. The per capita household income in the South region stands at R$1,744.33, with a demographic density of 53.19 inhabitants per square kilometer and a human development index of 0.756.

In the state of Rio Grande do Sul, on February 26, 2021, State Decree No. 55,771 was issued, introducing a set of segmented sanitary measures known as the "Final Black Flag," characterized by high restrictions in response to the surge in COVID-19 cases and fatalities (FILHO, 2021). This decision was prompted by the complete occupation of ICU beds in the state. In Paraná, a pattern of rising cases and deaths, mirroring the situation in Rio Grande do Sul, has been evident since the early stages of the pandemic. Notably, all public events were canceled, with the exception of the municipal elections in October 2020. The situation worsened significantly in the first weeks of December and early January, resulting in Paraná reporting the highest number of COVID-19 cases and deaths. On February 27, 2021, there was a substantial 45.9% increase in cases over a 15-day period. Meanwhile, in Santa Catarina, during February 2021, authorities reinstated restrictive measures in response to a new wave of COVID-19 cases in the South Region (KERR et al., 2020). The state of Santa Catarina adopted a more flexible approach compared to the other two states, particularly concerning access and mobility restrictions, and this flexibility was primarily coordinated through the state's Health Emergency Operations Center.
This case study seeks to investigate the effects of government decrees on the institutional, organizational, governance and political factors (IOGP) that occurred during the pandemic period in Brazil and how the states in the southern region managed the different factors.

**Methods**

Case study of a region of Brazil. Sociodemographic, cultural and climatic aspects were investigated to better understand its characteristics and spread the virus in 2020-2022. This document describes case studies to explore how institutional, organizational, governance and policy (IOGP) factors shape decision-making factors and the choice and implementation of public health interventions to manage COVID-19 in the Southern Region of Brazil. The Method was proposed by the University of British Columbia, in Canada, by Dr. Peter Berman's team (Figure 1). The framework comprises the following:

**Upstream Factors (those influencing decisions to choose and implement interventions):**

- **Broader context** – representing more stable social, cultural, behavioral, and economic factors that vary across jurisdictions, but less so over shorter time periods.
- **Institutions** – representing both institutional structures and widely accepted norms of behavior and rules of conduct, building on the concepts elaborated by North, Ostrom, and others.
- **Politics** – including features of the political ideology of parties, the role and position of elected officials and leaders, the role of key social interests, and the influence of electoral events.
- **Organizations** – primarily focusing on the government organizations charged with public health functions but also other health system organizations within and outside government that may be important in implementing or influencing the public health response.
- **Governance** – focusing on understanding the processes of decision-making and implementation at the interface between politics, organizations, and citizens.

**Downstream Effects (those related to the implementation of interventions and their effects):**

- **Implementation of interventions** to mitigate pandemic spread and address clinical and social needs.
- **Stringency of interventions** – assessment of how widely and well interventions are implemented.
- **Timing of interventions** related to the epidemiology of pandemic evolution in a jurisdiction.
- **Health outcomes** such as cases, hospitalization, and deaths.
- **Other outcomes** such as those related to mental health, economic stresses, education performance.
For this study, sociodemographic, cultural and climatic information were first researched. After this step, the first pandemic decree was researched in each state in the southern region of Brazil and data on the number of deaths, cases and recovered were obtained from the platform of the Ministry of Health and each state. From these data, the numbers of deaths and cases per 100,000 inhabitants were calculated. Another piece of information was the number of inhabitants per state researched on the website of the Brazilian Institute of Geography and Statistics (IBGE). SPSS Statistics 21 software (IBM Corporation) was used to perform the analyses. Data were transcribed as mean and standard deviation.

Results

Data on the number of cases, deaths and recoveries are presented in Table 1 along with the total number of inhabitants by state in the southern region of Brazil, in addition to the date of the first state pandemic decree. The First Pandemic Decree of each state was issued between the months of February (Decree No. 40,475 of February 28, 2020 - Federal District) and May (Decree No. 55,240, of May 10, 2020- State of Rio Grande do Sul). When analyzing the number of cases, there were similar numbers in the three states of the southern region in relation to the number of infected: Paraná (1,963,743), Santa Catarina (1,442,511) and Rio Grande do Sul (1,826,295).

When analyzing the number of deaths in each state, the highest death records occurred in Paraná (41,017) and Rio Grande do Sul (36,873). In relation to deaths by sex, the highest number of deaths occurred in women in Paraná (53%) and Rio Grande do Sul and in Santa Catarina in men (57.7%). In relation to vaccination by state until February 2022, Paraná had vaccinated 9,683,790 people with two doses, 5,101,650 in Santa Catarina and 8,027,190 in Rio Grande do Sul.
Table 1. Population characteristics and epidemiological data since the date of the First pandemic Decree of each State in South Region and number cases, deaths and recovered for State 2019-2022

<table>
<thead>
<tr>
<th>First Decree</th>
<th>Number of cases</th>
<th>Number of deaths</th>
<th>Number of recovered</th>
<th>Number of inhabitants (2010 CENSUS)</th>
<th>Demographic density (2010 CENSUS) Inh/Km²</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTH REGION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parana</td>
<td>Decree nº. 4,319, of March 23, 2020, it declares the state of public calamity, as a measure to face the public health emergency of international importance resulting from the Coronavirus (COVID-19).</td>
<td>1,963,743</td>
<td>41,017</td>
<td>1,577,943</td>
<td>11,516,840</td>
</tr>
<tr>
<td>Santa Catarina</td>
<td>Decree nº. 515, of March 17, 2020, it declares an emergency situation throughout the territory of Santa Catarina, under the terms of COBRADE nº. 1.5.1.1.0 - viral infectious diseases, for the purpose of preventing and fighting COVID-19, and other measures.</td>
<td>1,442,511</td>
<td>20,579</td>
<td>1,355,363</td>
<td>7,252,502</td>
</tr>
<tr>
<td>Rio Grande do Sul</td>
<td>Decree nº. 55,240, of May 10, 2020, institution of a controlled distance system for the purpose of preventing and fighting the epidemic caused by the new Coronavirus (COVID-19) within the scope of the State of Rio Grande do Sul, reiterates the declaration of state of public calamity throughout the state and other measures.</td>
<td>1,826,295</td>
<td>36,873</td>
<td>1,654,066</td>
<td>11,422,973</td>
</tr>
</tbody>
</table>

Data source: IBGE 2010; SSPR2022; SESSC, 2022; CEVS-RS, 2022;
In the State of Paraná, 53% of cases occurred in women and 47% in men, with 58% of deaths in men (n=23,605) and 42% in women (n=17,412) (SESA, 2022). As for vaccination against COVID-19, by the beginning of February 2021, 22 and a half million people had received the first and second doses, for a total of almost 10 million vaccinated (SESA, 01/31/2022). In the State of Santa Catarina, 52.6% of women (758,772) and 47.4% of men (683,711) had COVID-19, with the most affected age groups being between 20 and 40 years old. Regarding deaths, 57.7% were men (11,864) and 42.3% were women (8,715). Deaths occurred mainly in the age group of 60 to 80 years. As for vaccination, 5,363,873 were immunized with the first and second dose, which corresponds to 73.96% of the population. In the state of Rio Grande do Sul, 46% of cases were in men and 54% in women. Most deaths occurred in women and men aged 30 to 39. In relation to the two doses, 8,027,190 people received both doses.

The table 2 shows, by federation unit, the relationship between the number of deaths and the number of cases, case rate per 100,000 inhabitants, mortality rate per number of inhabitants and mortality rate per 100,000 inhabitants in the year 2020-2022. The states with the highest number of cases per 100,000 inhabitants were Paraná (1,963.743), Rio Grande do Sul (1,826.295) e Santa Catarina (1,442.511).
## Table 2 - Mortality rate, cases rate and death to 100,000 inhabitants in South Region of Brazil, 2020.

<table>
<thead>
<tr>
<th></th>
<th>Deaths/Number of cases (%)</th>
<th>Cases rate /100,000 inhabitants</th>
<th>Deaths/Number of inhabitants (%)</th>
<th>Mortality rate/100,000 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOUTH REGION</strong></td>
<td>1.79%</td>
<td>6,486.95</td>
<td>0.12%</td>
<td>116.12</td>
</tr>
<tr>
<td>Paraná</td>
<td>2.1%</td>
<td>5,618.14</td>
<td>0.12%</td>
<td>280.78</td>
</tr>
<tr>
<td>Santa Catarina</td>
<td>1.4%</td>
<td>9,246.51*</td>
<td>0.11%</td>
<td>352.42</td>
</tr>
<tr>
<td>Rio Grande do Sul</td>
<td>2.0%</td>
<td>5,610.83</td>
<td>0.12%</td>
<td>309.79</td>
</tr>
<tr>
<td><strong>AVERAGE BRAZIL</strong></td>
<td><strong>2.48%</strong></td>
<td><strong>6,579.27</strong></td>
<td><strong>0.13%</strong></td>
<td><strong>132.94</strong></td>
</tr>
</tbody>
</table>

Data source: IBGE 2010; SSPR2022; SESSC, 2022; CEVS-RS, 2022; *Data above the Brazilian average.
Discussion

The COVID-19 pandemic, caused by the new coronavirus SARS-CoV-2, generated significant global repercussions in the medical, epidemiological, social, economic, political, cultural and historical dimensions (MELLO et al., 2020). The challenges in combating COVID-19 arose from limited knowledge about the virus, its rapid transmission and its potential to cause fatalities in vulnerable populations, creating uncertainty regarding the most effective strategies around the world (WERNECK & CARVALHO, 2020).

In Brazil, a national public health emergency was declared in February 2020, initiating technical training for coronavirus laboratory diagnosis. The quarantine law (BRASIL, Law No. 13,979) came into effect on March 20, 2020, coinciding with the Ministry of Health's declaration of community transmission after confirming the first COVID-19 case in São Paulo on February 26, 2020. The country experienced two pandemic waves, with the first peaking in July and the second commencing in January following year-end and summer festivals, resulting in approximately 254,221 deaths by early 2021. The COVID-19 outbreak exacerbated political, economic, and social challenges (AQUINO et al., 2021). Brazil's vast size, regional disparities, and the decentralization of pandemic response actions, as dictated by the Supreme Federal Court (STF), allowed states and municipalities to adopt their own measures, granting each state autonomy, with financial support provided by the Federal Government (MORAES, 2020).

The COVID-19 pandemic in Brazil witnessed varying moments of contagion and death influenced by a range of factors. Initial cases were associated with the failure to cancel Carnival celebrations in February 2020, leading to public health chaos in several states. Throughout 2020, flexibility in pandemic control measures was observed during celebrations like Mother's Day, Father's Day, and Valentine's Day, particularly in commerce and entertainment. In November, municipal elections for 5,570 City Halls further facilitated gatherings. Brazil's approach to relaxing social distancing measures differed from that of most countries, which emphasized monitoring the pandemic's transmission speed (AQUINO et al., 2021).

At the national level, Law No. 14,019/2020, enacted on July 3, 2020, made the use of personal protective masks mandatory in public and private spaces during the COVID-19 pandemic. Initially, several measures, including restrictions on gatherings and compulsory mask usage in essential activities, were rigorously enforced (HOUVÉSSOU et al., 2020). These measures were simultaneously implemented, with different regions issuing pandemic onset decrees between February and May. Responses from each state varied, making it challenging to assess the impact of social isolation. Interestingly, the state of Rio Grande do Sul, which was the last to declare a pandemic situation, had fewer cases and lower total deaths per inhabitants compared to the national average.

Few studies have comprehensively assessed the actual impact of social distancing in combating COVID-19 transmission, emphasizing the need for implementing multiple preventive measures to enhance intervention strategies (AQUINO et al., 2021). In 2020, there were no federal or state decrees identified that controlled the entry of international flights. Notably, it was only on May 14, 2021, that Ordinance No. 653 was issued, imposing exceptional and temporary restrictions on the entry of foreigners, irrespective of nationality, as recommended by the National Health Surveillance Agency (NHSA) (BRASIL, Ordinance No. 653 of May 14, 2021).
The COVID-19 quarantine lifestyle led to changes in circadian rhythms, affecting eating and sleeping patterns in both adults (SILVA et al., 2020) and adolescents (BRITO et al., 2020). Such changes contributed to increased body weight and increased susceptibility to COVID-19. Excess weight aggravates the inflammatory processes associated with the second phase of the virus, potentially increasing the risk of therapeutic failure (SALES-PERES, 2020). Some Brazilian cities have banned outdoor activities, such as visits to parks and trips to the beach. However, regular physical activity has emerged as a crucial protective factor (SALLIS, PRATT, 2020), with physical inactivity linked to greater morbidity and mortality in cases of COVID-19 (SALLIS et al., 2021).

In the first months of the pandemic, Brazil took significant measures to address the crisis, including expanding the capacity of the Unified Health System (UHS), improving health infrastructure, increasing the availability of ICU beds for patients with COVID-19 and the reinforcement of human resources through doctors' recruitment via notices. Furthermore, there was a change in health service provision protocols, mainly in the regulation of telemedicine (CIMINI, JULIÃO & SOUZA, 2021). Field hospitals, temporary emergency care units with multidisciplinary teams, were created in almost all Brazilian states to respond to the growing number of COVID-19 cases (AIRES, 2020). Assessing the effectiveness of these field hospitals was a challenge. The discordant actions of federal, state and municipal governments, compounded by the struggle to balance economic stability and public health, have likely contributed to the worsening health crisis in Brazil, especially in southern Brazil.

The systematic analysis of 28 Contingency Plans, including a national plan and state plans, highlighted commonalities between national and state levels in proposals for healthcare reorientation, case detection, and referral hospital recommendations. Weaknesses in state-level plans were identified, including challenges in acquiring mechanical ventilation devices, determining human resource needs, regionalizing hospital care, and forecasting bed availability, particularly in opening reference hospitals or contracting additional ICU beds (SANTOS et al., 2021). Importantly, bed shortages in Brazilian hospitals and ICUs were a preexisting issue (MEDEIROS, 2018).

As the pandemic progressed, the gap between strategies to “flatten the curve” and “expand the capacity of the health system” increased, with difficulties in expanding infrastructure, such as acquiring testing equipment and ventilators (CIMINI, JULIÃO & SOUZA, 2021). The heterogeneity of actions at the federal, state and municipal levels revealed the complexity of Brazil's response to COVID-19, with regional disparities, weaknesses in state health systems and limited coordination by the Ministry of Health (SANTOS et al., 2021). The lack of common criteria to guide social distancing measures and allocate resources for the expansion of the SUS became evident at the beginning of the crisis (CIMINI, JULIÃO & SOUZA, 2021).

While income and employment protection measures in the mitigation axis were crucial for encouraging social distancing, they were not implemented in time to compensate families for income loss. Social distancing alone appeared insufficient in mitigating the virus's spread, as its effect on reducing mortality was inconclusive worldwide (BERRY et al., 2021; SAVARIS et al., 2021). The absence of clear guidance complicated public engagement in combating the disease. On the other hand, early mitigation measures, initiated as soon as the first cases were identified, helped mitigate the
The COVID-19 pandemic has brought significant global challenges, with the emergence of more aggressive SARS-CoV-2 variants leading to additional waves of contamination, raising concerns about vaccine effectiveness (Sweijd & Zaitchik, 2021). Worldwide, policy responses have varied, including extensive testing, lockdowns, and voluntary social distancing (Peña, 2020). Initially, the focus was on reducing virus transmission, but over time, policies shifted to address broader health and well-being impacts (Cimini, Julião & Souza, 2021). Efforts have also concentrated on strengthening healthcare capacity and governance responses (Delivorias & Scholz, 2020; Peña et al., 2020; Smith et al., 2020).

In May 2020, Brazil experienced a high daily death toll, leading the Ministry of Health to recommend easing restrictions despite the lack of a significant decline in the number of cases. The state of Santa Catarina, adopting more flexible containment measures, had lower rates in the southern region. Effective state contingency plans should encompass strategies for healthcare, management, actions to reduce social inequalities, specialized care for vulnerable groups, and the promotion of healthy behaviors like physical activity.

With additional waves of infections caused by new, more aggressive virus variants, influenced by several factors, including vaccine distribution, concerns have arisen regarding vaccine effectiveness. The global response to the COVID-19 pandemic has involved a range of policy measures focused on reducing transmission of the virus and addressing broader impacts on health and well-being (Cimini, Julião & Souza, 2021). These measures included strengthening health capacity and governance responses (Delivorias & Scholz, 2020; Peña et al., 2020; Smith et al., 2020).
Conclusions

Studying the effect of government decrees during the COVID-19 pandemic in southern Brazil demonstrated the intricate relationship between policy implementation and its far-reaching consequences. It becomes clear that these decrees not only dictated immediate responses, but also significantly shaped organizational structures, governance dynamics and decision-making processes at various levels of authority. Furthermore, it showed the importance of political considerations in defining responses, evident in the way events impacted virus transmission. This research also highlighted the complexities of managing a pandemic within a decentralized governance framework, shedding light on the interaction between government decrees, institutional dynamics and the implementation of public health strategies.

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