

Rural Women, Covid-19, and Vaccination the Brazilian Government's Absent in Guidance in Communication

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Abstract

The present study aims to understand the perception of rural women on vaccination and their responses to the vaccination appeal. It also seeks to analyze the government communication strategies for immunization. This exploratory research interviewed 20 women aged between 18 and 73, living in the Zona da Mata region in the Brazilian state of Minas Gerais. The participants accepted well the vaccination against Covid-19. This result mainly owes to the informative role of television and the leading position assumed by some local administrations, which adapted communication strategies to suit rural people better.

Keywords: rural health; intersectionality and Immunization.

1. Introduction

Vaccination is the most effective and cost-efficient way to prevent. Nonetheless, the debate over vaccine hesitancy (reluctance, indecision, or refusal) has grown worldwide and has become a central issue for immunization programs attribute such hesitancy to complex causes stemming from when and where vaccination occurs, the vaccine in question, and the target population. According to these researchers, the strongest opposition to the Covid-19 vaccines was observed in peoples with a set of contextual and clinical characteristics, such as female gender, older adults, evangelicals, and individuals that had been infected with the virus but asymptotically.

In Brazil, vaccine hesitancy found an ally in the Federal Government itself. While most of the Brazilian rulers made political articulations to immunize the population of their origin states, the then president, Jair Bolsonaro (2019-2022), ignored 101 emails sent to his office by the manufacturer Pfizer, in which the pharmaceutical company offered the country vaccines for half the market price [01-05]. Moreover, the president made abundantly clear his opposition to vaccination, claiming not to have been immunized and consistently spreading misinformation. For example, in one of his infamous speeches, he said, "If you turn into an alligator [as an adverse event], that is your problem

[06]." Despite the technology exchange agreements with other nations, the denialist administration has caused Brazil to lag in developing and producing vaccines [07]. Immunization only began 40 days after the first countries had started vaccinating their populations. Rural areas often face a social vulnerability background characterized by poor schooling and inadequate housing conditions – for example, 30.4% of the households do not have piped water, and 67.4% do not have sewage treatment. This fragility is also perceived in the access to information and public health services, as the latter are practically unavailable in those regions, and the knowledge of good preventive hygiene habits is precarious. The existing appalling conditions were aggravated during the pandemic by socioeconomic factors and the scarcity of reliable information.

Given this scenario, the present work investigated how communication processes take place in rural areas of Brazil, where 30 million people live (out of the 213.3 million total population). It considered this context and aimed to understand the perception of rural women about vaccination and their response to the vaccination appeal. It also sought to analyze the governmental communication strategies for immunization. This exploratory research interviewed 10 women living in the rural area of Viçosa, in the Zona da Mata region, the Brazilian state of

Communication about vaccination in Brazil

The relationship between communication and health has a role beyond merely informing society about health-related topics and disease prevention. It constitutes a multidimensional universe where agents and institutions develop strategies, build alliances and antagonisms, and conduct negotiations. In Brazil, this binomial has a long and somewhat controversial history, as many communicational models have been used to promote different ways of conceiving the health-disease process, including those concerning vaccination campaigns. Transmissible diseases have been worrisome to international public health since the beginning of the twentieth century. Multinational cooperation agreements have been established in most of Latin America to deal with health issues. A remarkable example was the Pan American Sanitary Bureau (PASB), created in 1902, then renamed Pan American Health Organization (PAHO) in 1958.

Smallpox, a highly contagious viral disease, posed great concern in Brazil for years, being controlled only with vaccination. Compulsory since 1846, the smallpox vaccine was then applied in an authoritarian manner: the population had their homes invaded, people who refused to take the shot were fined, and the vaccination certificate became a requirement for enrolling in schools and public jobs, issuing marriage certificates, traveling, and other situations. These measures for disseminating and implementing smallpox prevention did not seek to establish a dialog with society, thus being contested by professionals who defended education as a way of growing awareness.

Nonetheless, the smallpox eradication campaign was so successful that it gathered more substantial investments for controlling infectious diseases preventable by immunization. These resources made it possible to build technical, political, and institutional bases that would be consolidated as essential state tools to control diseases effectively in the following decades. In 1973, the Brazilian National Immunization Program (Programa Nacional de Imunização, PNI) was created to enhance epidemiological surveillance over the national territory and educate people to increase their receptivity to vaccination programs. The program used language adequate for the public to make communication more effective. It also advocated for the dialog with parents and legal guardians of children under one year of age – the target population of the vaccines offered by the public health services. The information and mobilization of communities were to assure a conscious adherence to vaccination programs.

Immunization campaigns have since been successful examples of the alliance between communication and health in Brazil. They have been through changes to improve communication strategies and make health practices less discouraging (the development of an oral vaccine for polio, for example). Initially, they addressed fear, guilt, exclusive parental responsibility and exploited images of children with severe physical disabilities. Over the years, they have begun to focus on individual and collective responsibilities in guaranteeing children vaccination,

defending it not only as an act of love but also as a constitutional right.

According to, a children's character was introduced to advertise the National Immunization Program. It was created in 1986 by the artist Darlan Rosa and started appearing in campaigns against polio, when a national contest was made to choose its name. Those actions promoted significant mobilization and effective involvement of the society around the theme of vaccination, and the character Zé Gotinha established itself as a synonym for vaccine and a reference for the population. The National Vaccination Day, whose institution had a huge epidemiological impact, and the well-organized campaigns also contributed to the acceptance of preventive practices and strengthened the reputation of the local health services.

However, despite the favorable outcome of the campaigns in Brazil, vaccination hesitancy is still a global threat, especially amidst the pandemic. The phenomenon is worrisome to the point that the World Health Organization includes it in the list of the ten threats to global health. For that researcher, vaccine hesitancy originates from a lack of adequate communication and distrust in the health authorities. Remarks that some events have contributed to the reluctance to vaccinate against the new coronavirus in Brazil, including the statement of some doctors against vaccination and misinformation that vaccines could compromise the DNA structure, cause infertility problems, and have unforeseen dangerous adverse effects. The author also points out that the communication about the Coronavac vaccine lacked transparency. One of the claims was that this immunizer would offer 100% protection, making people feel deceived whenever someone who had taken the shot got sick or eventually died. For, the anti-vaccine (anti-vax) movement is "always ready to take advantage of fear and mistrust. It only takes a dozen people with good social-media skills and the right environment to do much harm."

Communication strategies for Covid-19 vaccination in Brazil
In Brazil, the National Operational Plan for Vaccination against Covid-19 brought the guidelines for communication on vaccination in chapter 10 [09]. According to the document: Communication is an important tool to reach thousands of Brazilian citizens in due time. People of different social and economic classes. That way, communication has to be easy to understand and uninterrupted, aiming to break negative beliefs against the vaccine to achieve the desired results and goals.

This plan considers only the diversity of markers related to income but disregards that others (gender, race, territory, etc.) can permeate them, representing a setback. From the perspective of, the interaction dynamics among the multiple subordination axes and the structural consequences produce a differentiating dimension, in which disadvantages interact with pre-existing vulnerabilities. In a health-crisis situation, the government ought to incorporate the intersectional perspective for a better understanding of the message.

Intersectionality has contributed significantly to public health.

This perspective has increasingly been used to approach social determinants and health disparities, assuming that more comprehensive analyses of social problems could yield more effective actions, thus helping fight oppression and bearing new initiatives for social justice. The priority groups for vaccine

communication were established based on intersectionality. The objectives of the communication strategies are divided by target audiences, as shown in Table 1.

	Target audience	Objective
1	General population	Keep the population informed about the importance and safety of the vaccines; explain the rigorous surveillance of any adverse event following immunization (AEFI) to maintain the entire process as smooth as possible.
2	Health professionals	Provide information on vaccination and sensitize them for their importance in the process, thus protecting the integrity and infrastructure of the health system and keeping the essential services operating.
4	Public service managers	Keep them informed and ensure coordinated interventions.
5	Ports, airports, and borders professionals	Provide information about vaccination, and reaffirm their role and importance in the process.
6	Ministry of Health social networks and partners	Keep the population well-informed by addressing any fake news and replying to messages.

Table 1: Target audiences of the vaccination communication.

Elaborated by the authors (2022). Source: National Operational Plan for Vaccination against Covid-19 As seen in Table 1, the Brazilian Federal Government did not consider the particularities of outlying and rural populations before drawing the communication strategies. The field "general public" cannot reflect the many segments that make up Brazilian society, nor does it cover its cultural logics. According, the cultural logic inherent in each society shapes and influences its health-promoting practices. Therefore, communication messages must contemplate multiple cultural logics.

This plan introduces 14 advertising pieces to be transmitted through a mix of media, including linear TV, segmented TV, the internet, social/local billboards, posters, and radio. Considering the huge number of people that even nowadays do not have internet access in Brazil (47 million, that is, one out of four Brazilians – CETIC DOMICÍLIOS, 2019), by electing television as the key vehicle for the campaign, the Ministry of Health took a different direction from the practices it had developed over

the first year of the pandemic, when the communication was exclusively structured around digital media. However, media and circulation strategies benefitted a group of narrow-reaching religion-based TV broadcasters. For example, they were granted seven times more vaccination ads than the audience-leader channel Globo [10]. According to, 20% of the campaigns were given to religious channels (or those that sell a significant part of their airtime to churches), while Globo got 3%, most of it to be aired out of prime time. Thus, by not prioritizing the leading-audience broadcaster, capable of best reaching remote places like rural areas, the Ministry of Health reinforced the gaps in health promotion, especially where access to these services is historically precarious.

As for the digital campaigns, they made use of cards on social media and email messaging. The Ministry of Health developed a smartphone application to manage the vaccination process and certificate emission (Figure 1). Since then, the digital medium has become essential for Brazilians [11].



Figure 1: Digital campaign for vaccination. Source: National Operational Plan for Vaccination against Covid-19.

As shown, the Ministry of Health did not create campaigns targeting rural women, which would speak directly to them. The government used a communication too generic, and that pattern was adopted throughout the pandemic, with no adjustments to suit populations living in small towns, favelas, rural areas, indigenous communities, or quilombos. Despite being part of

the memory of Brazilians, the children's character Zé Gotinha, created to stimulate polio vaccination, started to appear in Covid-19 immunization campaigns only in May 2021 (Figure 2), after requests by the Brazilian Pediatrics Society and the Brazilian Immunization Society made in March 2021 [12].

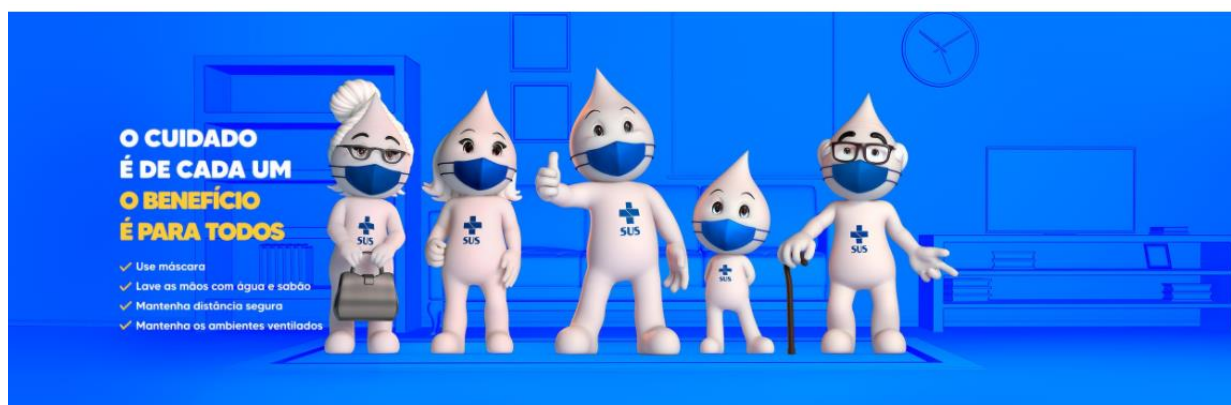


Figure 2: Vaccination campaign against Covid-19. Source: National Operational Plan for Vaccination against Covid-19.

The delay in using proven effective communication strategies with great appeal to Brazilians to emphasize the importance of vaccination just reinforces the denialism and unpreparedness of the then government to deal with the health crisis.

2. Material and methods

This research combines some methodologies and a literature review on the relationship between communication and health. It performed a documentary analysis of the communication guidelines on vaccination in Brazil, presented in Chapter 10 of the National Operational Plan for Vaccination against Covid-19 and in advertising campaigns aimed at the general public from January 20 to June 14, 2021. The goal was to categorize

intersectional aspects. Subsequently, from November 10 to 25, 2021, interviews were conducted with 20 women aged between 18 and 73. They lived in the rural area of the Viçosa micro-region or the Olga Benário settlement in Visconde de Rio Branco, both in the Zona da Mata of Minas Gerais.

The region has an occupation historically associated with the coffee culture expansion. The agrarian structure of the region comprises small farms with little agricultural production mostly pasture areas and crops such as corn, beans, rice, cassava, coffee, citrus fruits, and vegetables. It is the least concentrated land structure in Minas Gerais, a state that places second in number of family-owned agricultural establishments in the country.

Profile of the participants

The demographic profile of the research participants (Table 2) reveals that they are agricultural producers, farmers, cleaners,

greengrocers, and stay-at-home mothers. They often perform more than one of these functions [13].

Interviewee	Age	Race	School level ¹⁴	Family monthly income
A	42	Black	Never attended school	1.5 salary
B	26	Brown	Incomplete higher education	2 salaries
C	73	Brown	Fundamental school I	2 salaries
D	37	White	Fundamental school II	2 salaries
E	44	White	Fundamental school I	2 salaries
F	46	Black	Fundamental school I	1 salary
G	58	Brown	Fundamental school II	1.5 salary
H	50	Black	Fundamental school I	2 salaries
I	61	White	Fundamental school I	2 salaries
J	38	Brown	Incomplete middle school	2 salaries
L	38	Brown	Middle school	1.5 salary
M	28	Brown	Fundamental school II	1 salary
N	43	Brown	Middle school	0.5 salary
O	38	Brown	Fundamental school II	3 salaries
P	39	White	Fundamental school I	2 salaries
Q	30	White	Middle school	1 salary
R	60	Brown	Fundamental school I	2 salaries
S	26	Brown	Incomplete higher education	2 salaries
T	62	Brown	Middle school	1.5 salary
U	18	Brown	Middle school	1 salary

Source: Elaborated by the authors based on the research data.

Table 2: Socioeconomic aspects of the interviewees.

It is worth noticing that 65% (15) of the participants were black or brown (mixed race). According to the National Household Sample Survey (PNAD, 2020), black women make up 28.7% of the Brazilian population, but they are 32.8% of the poor people living on less than US\$ 5.50 per day and 9.1% of the extremely poor ones, who have to subsist on a daily income of less than US\$ 1.90. Besides, Brazilian blacks (black and brown peoples) form the most epidemiologically vulnerable group, as they tend to build up some pre-existing risk conditions, including chronic illnesses, little access to health services, poor housing conditions, and work practices with high chances of exposition to the virus, such as household chores and informal jobs. They also need more support from the State, as 67% of those who depend exclusively on the Unified Health System (SUS) are black.

As for family monthly income, ten participants (50%) stated that they live on two minimum salaries, three (15%) on one-and-a-half salary, four (20%) on one salary, two (10%) on just

half a salary, and only one interviewee said that her family earns three salaries per month [14, 15]. The low income becomes evident, considering those families have between two and five members, and some live below the poverty line. This situation was substantially aggravated by the global crisis triggered by the new coronavirus, which led to a considerable price rise in most staple products.

3. Results and discussion

Rural women and vaccination: The vaccine against Covid-19 was well accepted among the participants, who had all been fully immunized. Three of them had already taken the booster shot, while the others were waiting for their turn according to the priority established by the Ministry of Health. Some excerpts from their testimonies confirm the acceptance: "I was very confident in the vaccine." (participant D), "In my opinion, the vaccine took too long [to be available for population]." (participant G), "I only took it because it was necessary. I am too scared of needles" (participant A). Participant H's statement

revealed some hesitation: "I was in doubt whether the vaccine would work, but I was vaccinated anyway."

Assuming that convictions of social subjects are imbricated in a symbolic system of world understanding, participant G's hesitation could be interpreted as a product of the controversies surrounding the conversations about the vaccine. From this perspective, one of the women (participant F) reported that she had decided to get vaccinated because she feared dying. Thus, even though vaccination has been a part of Brazilian society, the

lack of communicational products targeting rural populations is not a novelty. It is no coincidence that the interviewees pointed out that they had not had the opportunity to get vaccinated in childhood in my case, it was only at 15 that I started getting vaccinated. (participant F) I was first vaccinated at old age (participant A) In the past, there was no such thing as a vaccination card in the countryside (participant I). When asked about how they get informed about the vaccine, the answers were given according to Figure 2.

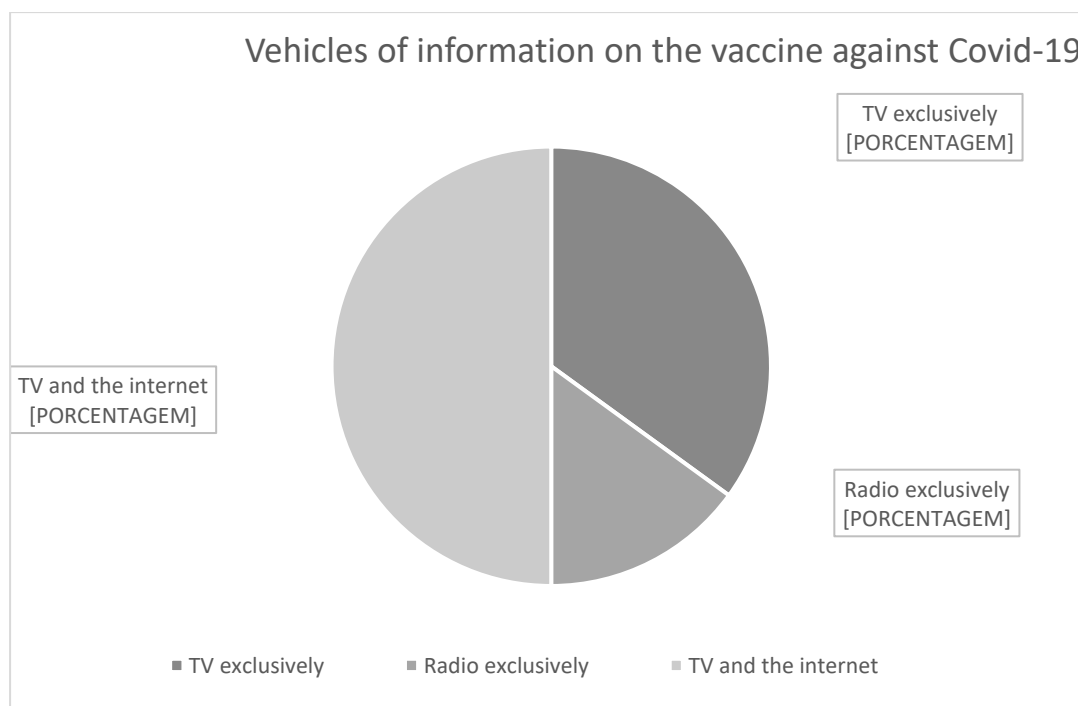


Figure 2: Source: Survey data.

The data above show that television is still the primary means of communicating information to rural areas. Participant G commented on the importance of the newscasts: "I got used to watching the news on TV to keep up with what was going on with the vaccination." The internet was the second most common source of information, mentioned by 10 participants (50%). Among them are participants E (44, white), a resident of the Palmital neighborhood who used to check the "city hall bulletin and WhatsApp"; M (28, brown), a resident of the Olga Benário settlement who followed the news through WhatsApp; and U (18, black), also from the settlement, who used Google to keep herself informed.

The internet was also used as a strategy for delivering news locally. Participant F remarked that she had received monthly home visits from a health agent ("the health lady"), who would bring information on the new coronavirus and the vaccines. According to F, the agent created a WhatsApp group where she would send information about the immunization calendar and make vaccination appointments. The eldest child of each family was responsible for joining the group, gathering the data, and passing it on to the others. In this case, information and communication technology (ITC) was the means of information,

but it happened indirectly for the interviewees through their children.

Three women pointed out the relevance of the radio for getting information about the vaccine: participant C (73, brown, not an internet user), participant I (61, white), and participant R (60, brown). They are in the same age range and represent the oldest participants in this research, which allows inferring that older women in rural areas still prefer radio communication. On communication adequacy for local specificities, the public administration of Coimbra (one of the cities in the micro-region under study) had been using a motorcycle with a loudspeaker, which would go on nearby roads advertising the vaccination calendar. "Where I live, a biker would ride around making announcements, so people got used to being alert to the information.", said participant B.

This communication action demonstrates the importance of implementing local measures aligned with the territorial logics. Knowing the territory and its logics is fundamental for promoting collective health, especially when facing risks. Risk experiences cross cultural and social dimensions, interfering with the public perception and the behaviour associated with

them [16]. Difficulty in understanding the information about vaccines appeared in some statements, including questions about the vaccination groups proposed by the Ministry of Health, the different vaccine manufacturers, and the interval between doses of each immunizer type. Participant E stated, "The information is confusing, and even to this day, I cannot understand it very well." For Participant A, their children were essential intermediaries in this information chain, "They were the ones keeping up with the city hall bulletin." It is worth remarking that any opinion or information inaccuracy about the vaccine can lead to resistance and non-adherence to the vaccination campaigns, making it even more difficult to execute them.

Regarding responsibility for the family's health, most of the interviewees (70%) said they were the responsible ones (for actions like taking someone to a doctor's appointment). Other participants (20%) stated that their husbands were in charge of health-related affairs, whereas, only one woman said the couple made these decisions together. This articulation between the family and health promotion reaffirmed the social role traditionally assigned to women as a healing resource. These results prove the relevance of health communication strategies that favor intersectional perspectives.

Regarding the national performance in managing the pandemic, the opinions varied: "Brazil did not do well because many people have died, and the vaccination started late" (participant A); "Nowadays it is better, and people are no longer dying in many cities" (participant I); "No. It is hard to understand. There is much confusion, and everyone says something different." (participant E); "There was not enough information to reassure the elderly." (participant H); "No, because the president could have helped more. He influenced people in the wrong way" (participant D). In participant D's opinion, "Not much was explained to people in rural areas. Rural workers suffer because we do not have much value" [17-20].

4. Conclusion

Despite the denialist management of Covid-19 by the Federal Government, which has cast doubt on the effectiveness of vaccines, the interviews made it possible to infer that the immunization culture in Brazil has contributed to the adherence of rural women to the vaccination campaign. Moreover, television proved to be a fundamental source of information on health for that audience. Although the Ministry of Health has not segmented the public of the vaccination campaigns against Covid-19 and promoted a communication too generalist, with no appropriate dialogue with vulnerable groups, rural women understood the importance of immunization to protect themselves and their family members amidst the pandemic.

A noteworthy finding of this research was the leading role some local governments took in adapting communication strategies for people in rural areas. For example, they employed health agents and used motorcycles with sound systems to spread information. Another interesting observation was the figure of the mediator, usually the youngsters with access to a cell phone or students living in urban areas. They became in charge

of transmitting information about vaccination to their parents, family members, and neighbors. They were also responsible for making immunization appointments via the internet. Lastly, considering the particularities of the rural population, their low education level, and restricted access to the internet, it is of utmost importance to reinforce the need for establishing health communication strategies aligned with socio-educational practices.

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