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Was lockdown worth it? community perspectives and experiences of the Covid-19 pandemic in remote southwestern Haiti

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ABSTRACT

Public experiences of COVID-19 pandemic lockdown differed dramatically between countries and socio-economic groups. Low-income countries raise unique empirical and ethical concerns about (1) the balance between benefits and social harms and (2) how explanatory disease models and everyday life realities influenced the experience and interpretation of lockdown itself. In this paper, we present qualitative data on community perceptions and experiences of the pandemic from a remote area of Haiti, with a focus on the 2020 lockdown. We conducted in-depth interviews with 30 community leaders in Grand'Anse Department, southwest Haiti, at two time periods: May 2020 and October–December 2021. We divide our results into five sections. First, our analysis showed that lockdown was widely considered ineffective at controlling COVID-19. Despite the lack of testing, community leaders believed most of the local population had caught COVID-19 in the first half of 2020, with limited reported mortality. Public concern about the pandemic largely ended at this time, overtaken by other socio-economic and political crises. Second, we found that popular explanations for the low fatality rate were related to various coping strategies: the strength of people's immune systems, use of natural prophylactic folk teas, beliefs about the virus, spiritual protections and the tropical weather. Third, we found that lockdown was widely seen to have not been appropriate for the Haitian context due to various challenges with compliance in the face of socio-economic vulnerability. Fourth, we found strong negative feelings about the social consequences of lockdown measures, which lasted from March–August 2020, including adverse effects on: food security, household income, education, health, and psychosocial well-being. Finally, these perceptions and experiences reinforced popular ideas that lockdown had been imposed by elites for financial and/or political gain, something that was also reflected in the discourse about the low vaccine acceptance rate. Our study showed that pandemic respiratory virus response in Haiti should better balance restrictive non-pharmaceutical interventions (NPIs) with existing socio-economic vulnerability. Local socio-behavioral dynamics and risk perceptions decrease the overall effectiveness of NPIs in fragile states and alternatives to lockdown, such as shielding the most vulnerable, are likely to be a more appropriate strategy.

1. Introduction

COVID-19 pandemic lockdowns arguably represent the most unprecedented and dramatic policy instrument used in recent public health history. Whole economies were shut down, billions of people were told to stay home, social interactions were deemed unsafe, markets and transport were stopped and democratic processes were suspended by emergency law (Green, 2021). Originally presented as temporary measures in 2020 (e.g. two weeks to 'flatten the curve') quickly transformed into many months of changing rules and regulations aimed at limiting human movement and interaction. From the beginning, there have been major concerns about lockdowns harming the global poor and public in

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fragile states (Broadbent et al., 2020; Hilhorst and Mena, 2021).

Lockdowns were implemented and experienced differently by different countries and social groups. Low-income countries (LICs) present a unique set of empirical and ethical concerns when evaluating lockdowns and other non-pharmaceutical interventions (NPIs). Debates about protecting "health" and/or "the economy" operate with a categorically different set of balances when the majority of a population lives below the poverty line and are dependent on subsistence agriculture; or live in an urban slum with no running water or an area prone to natural disasters and civil conflict. A growing body of research has validated initial concerns that lockdowns and NPIs would have substantial and negative livelihood and health consequences for people in LICs (Bardosh, 2023). According to the 2021 United Nations (UN) Sustainability Development Goals report, *"Years, or even decades, of progress have been halted or reversed. In 2020, the global extreme poverty rate rose for the first time in over 20 years. Hundreds of millions of people were pushed back into extreme poverty and chronic hunger"* (UN, 2021).

Three other empirical concerns exist. First, there are significant questions about the effectiveness of lockdowns on COVID-19 epidemiology in LICs since people will be less able or willing to follow state-mandated emergency rules on human movement and socio-economic life (Durizzo et al., 2021). Second, COVID-19 mortality has been significantly lower in LICs compared to high and medium-income countries, due to demographic differences and other factors (Adams et al., 2021; Wang et al., 2022). Finally, the balance between perceived benefits and harms will undoubtedly inform the public interpretation and reaction to lockdowns in low-income countries, including the level of support, rumors and resistance. These will have longer-term impacts on public trust in medicine and government, situated within broader socio-political contexts. Any analysis of these issues should integrate anthropological and sociological perspectives that elucidate the interplay between everyday lived realities, disease explanatory models and coping strategies, which influence population responses (attitudes, behaviours, opinions, experiences) to public health interventions (Abramowitz et al., 2015; Manderson and Levine, 2020; Rothman, 2021).

In this paper, we present a qualitative analysis of community perceptions and experiences of the pandemic from one remote, rural department of southwestern Haiti, vulnerable to natural disasters and ongoing political crisis. We integrate data on disease perceptions and experiences with those of the state lockdown response (March–August 2020) to make five arguments. These include: 1) local ideas and experiences of viral spread reinforced the idea that lockdown was ineffective; 2) coping strategies also shaped these popular explanations; 3) lockdown was generally viewed as inappropriate to the Haitian context; 4) government policies were seen as responsible for a range of adverse social consequences on food security, household income, education, health, and psychosocial well-being; and 5) these perceptions reinforced the idea that the Covid response was imposed by international and national elites for political and/or financial gain. We then discuss the implications of our analysis for preparedness and response to pandemic respiratory viruses in low-income countries in particular.

2. Methods

2.1. Study location

This study was conducted in two phases in May 2020 and October–December 2021 in Grand'Anse department, the most southwestern point of Haiti. This rural department is home to 550,000 people, mostly subsistence farmers, located a day's drive from the capital, Port-au-Prince. Although the department capital, Jeremie, is connected to the national highway, most roads are in poor condition. Towns and hamlets are more densely settled along the road network, with some remote mountain and coastal communities accessible only by foot or motorbike. Most of the population earns less than $2 per day and food insecurity is common.

It is also important to appreciate the history of natural disasters and other crises in the area since they shaped public interpretations of the pandemic. Hurricane Matthew directly hit Grand'Anse in 2016, sparking a humanitarian disaster by destroying tens-of-thousands of homes. A large earthquake struck Grand'Anse and neighboring Nippes and Sud department in August 2021. This earthquake caused more than 2000 deaths, destroyed nearly 100,000 buildings and sparked a second humanitarian crisis; hundreds of thousands of people were displaced in the three departments.

Lockdowns were also not entirely new in Haiti. From September to December 2019, an abrupt fuel price increase led to mass social unrest and violence across the country leading to what became known as *Peyi Lòk* (country in lockdown) (Blanc et al., 2020). A form of resistance politics against the incumbent president, Jovenel Moise, *Peyi Lòk* involved protesters blocking streets, disrupting civil life (including closing schools) and demanding money from vehicles.

2.2. An overview of the Haitian COVID-19 pandemic response

Haiti's pandemic response began with the declaration of a state of emergency by President Moise on March 19, 2020. This included a stay-at-home order, closing the border, internal movement restrictions, night curfews, bans on gatherings of over 10 people, and the closure of schools, universities, places of workshop, workplaces and industrial parks. Over the next few months, these measures were extended and reinforced in different ways across the country, including bans on public transport and movement to certain regions. People were told to avoid and limit their visits to food or commercial markets; although they were not formally closed, their opening times were limited. The disruption to international and national transport routes with the USA and Dominican Republic created major shortages in essential goods. Mask mandates were implemented in May 2020. During this month, the *UN Economic and Social Council* made a public statement urging the government to address the deteriorating humanitarian, human rights and economic crisis worsened by pandemic restrictions, including food insecurity and increased violence and political insecurity (ECOSOC, 2020). The state of emergency was removed on July 20, 2020 by the government. Schools reopened in mid-August 2020 (having been closed for 5 months) although public sector workers were encouraged to work from home on a rotational basis.

Haiti has one of the world's lowest reported mortality rates from COVID-19. Officially, there have been only 33,756 confirmed cases (through October 2022), with 857 deaths among a population of 11 million; in contrast, neighboring Dominican Republic (population 10.7 million) reported 646,000 cases and 4384 deaths (see: https://coronavirus.jhu.edu). Wang et al.'s (2022) modeling study estimated 27,900 excess deaths in Haiti from 2020–22, but this estimate did not differentiate causes of excess deaths, nor has it been validated with empirical data.

Table 1
Interview respondents.

Socio-demographic factors		Number of respondents
Sex	Female	21
	Male	9
Age	18–30 years	13
	31–40 years	9
	41–50 years	7
	>50 years	1
Occupation	Student	6
	Health worker	12
	CHCs members	3
	Civil society members	6
	Merchant/trader	3

2.3. Qualitative interviews and analysis

This research was nestled within a pre-existing malaria program called the community health council (CHC) initiative that has operated in Grand'Anse since 2018 (Bardosh et al., 2023). As of 2020, there were 59 CHCs (each with roughly 10 members) operating in all communes of Grand'Anse. One initial goal of our study was to find ways to use this malaria initiative to support the Haitian government's COVID-19 response.

We selected 30 CHC members to participate in this qualitative study using convenience sample (Table 1). We selected members who were part of the existing management board of their CHC (3 elected members perform this function in each CHC) because these members were more likely to have cell phones and be available for interviews. We selected members from all 12 of the communes in Grand'Anse with the aim of an equitable participant sample based on gender, age and socio-economic status.

Interviews were conducted in Haitian Creole by phone in May 2020 (Phase 1) and in-person or by phone in October and December 2021 (Phase 2). The same 30 individuals were interviewed in both phases of the study. Each interview lasted over 1 h. An interview guide was used to structure the interviews. Phase 1 interviews focused on public health measures, experiences of disease, perceptions of the pandemic response, impacts from the pandemic, information and public communication and how the CHC initiative could help assist MSPP with COVID-19 mitigation. Phase 2 interviews revisited these themes but with more of a focus on masks, vaccines, trust and the perceived long-term consequences of pandemic lockdowns. Probing questions focused heavily on clarifying participants' personal experiences and opinions in relation to the experiences and opinions of people in their social network and what they perceived to be broader trends in their community.

Interviews were audio-recorded, transcribed into Haitian Creole using Microsoft Word and then translated into French and English for analysis. Inductive thematic analysis was used to code the transcripts. An initial code list was refined through discussions between the qualitative research team (KB and LJ) and regular discussions were held to evaluate emerging findings and how best to triangulate them during subsequent interviews. An initial analysis of the 2020 interviews then led to the creation of a second interview guide. Our analysis of phase 2 interviews showed that the majority of the data rearticulated roughly the same findings from May 2020, although new data emerged on vaccines, masks, testing and trust of the pandemic response. Our research also drew on the experiences and knowledge of the authors (LJ, LD) living and working in Haiti during the pandemic.

There are a number of important limitations of our study that merit caution in generalizing our findings. The convenience sample was selected from pre-existing community leaders with an existing relationship with the research team, but the sample size was still small and limited to one department in Haiti. Most interviews were conducted remotely and this limited opportunities for causal interactions, observations and data validation. The research team did visit the department from October to November 2021, which allowed time for informal interviews and discussions.

Based on the findings from our May 2020 interviews, we decided to not involve the Community Health Counsels (CHC) in COVID-19 outreach or mitigation interventions; there was a significant risk that this would politicize the anti-malaria efforts of the CHCs.

2.4. Ethics

Emory University's Institutional Review Board (IRB) and Haiti's Comité National de Bioéthique deemed this study exempt from formal ethics review. Informed consent was obtained from each participant following standard ethical protocols.

3. Results

Our results are divided into five sections.

3.1. Lockdown was viewed as ineffective at controlling COVID-19

Local experiences and disease explanatory models of COVID-19 in Haiti reinforced the widespread perception that lockdown policies had been ineffective at controlling the virus. Community leaders recounted how the initial media reports in March 2020 from Europe and America generated significant fear of impending mass death in their communities.

> *"I was very scared because the coronavirus can cause sudden death. Many people were very stressed, you could see it in the way they behaved … Watching TV I saw the damage caused by the virus every day and I was very stressed."*
>
> (Female, 22, nursing student, 2020).

> *"At the very beginning I did not stay at home and then after I got scared, I respected the lockdown because I heard that everyone was only talking about one disease. I thought if big countries were afraid there was something and this time it was all over with us."*
>
> (Female, 23, nursing student, 2020)

This concern quickly passed so that by the time of our May 2020 interviews: the general perception was that COVID-19 had spread – like a wave – across Haiti in early 2020, infecting most people. The experience was framed as an epidemic of "little fever" (*tilafyev*) that occurred in March and April 2020. Whereas health authorities had informed the public that not all fever was COVID-19, few believed them. Our respondents strongly felt that community members assumed they had had the virus in early 2020. This mirrored past experiences with "waves" of Chikungunya (2013) and Zika (2016) (Bardosh, 2019). In the absence of testing, every cold-related symptom (fever and cough) had been reinterpreted within the etiological of a "possible" or "likely" COVID-19 infection (see Text Box 1).

> *"Although it is the test that should confirm, we do not have this possibility in the municipality. Almost everyone in the community knows the signs and symptoms of COVID-19 … most people have had the disease."*
>
> (Male, 46, civil society organization, 2020)

There had been very little effort to organize contact tracing in 2020 and limited access to testing continued in Grand'Anse in late 2021. Stigma and discrimination associated with testing positive was reported to be strong in the first half of 2020; while this had reduced over time it had not disappeared. In our 2021 interviews, community members continued to report that some people hid their suspected or confirmed COVID-19 infection due to fear of being quarantined. Many felt that the health system did not have an ability to support case management for the average person and so questioned the benefits of seeking formal medical care. This was compounded by the perception that hospitals and clinics acted as a major source of viral spread in 2020.

> *"The stigma still exists but a little less [than in 2020]. However, to date no one would claim to have* COVID-19 *… this disease is like leprosy. I know a lot of people who were symptomatic but had not been tested. They were afraid to say so ….The MSPP mobile team [could] come and ask them to go into quarantine."*
>
> (Female, 51, civil society, 2021).

None of our 30 research participants reported knowing someone in their social networks who had died from COVID-19 in 2020 or 2021. They did hear of particular politicians and doctors who died, reported in the national and local media.

Text Box 1
Examples of suspected COVID-19 illness

These quotes are from interviews conducted in 2020 and represent suspected Covid-19 infection during February to May 2020 in Grand'Anse, Haiti.

Case 1: *"My boyfriend had the fever and cough. He kissed me and afterwards I felt signs like fever, cough and anosmia. Without having taken any treatment we were cured. I don't know if it was the corona. I had not called the MSPP because we were not expecting any real benefit from their service."* (Female, 30, civil society, 2020)

Case 2: *"There were rumors that people in my church had Covid, and were hiding it. I had some signs of Covid-19. I drunk chamomile and ginger tea and got better."* (Female, 32, civil society organization, 2020)

Case 3: *"A lady in my choir practiced all MSPP guidance and still got ill but was okay."* (Female, 27, civil society organization, 2020)

Case 4: *"The state is unable to provide services. There was a doctor with Covid-19 who could not be taken care of in Grand'Anse. He was transferred urgently by MSPP to Mirbalais to prevent his death."* (Male, 48, health worker, 2020)

Case 5: *"I know a lot of people had Covid and were staying home on an outpatient basis and getting natural medications. They thought hospitals were causing death. The healing process is faster if you stay at home. Many people know about the [antibiotics] and natural remedies."* (Female, 24, nursing student, 2020)

Case 6: *"We didn't have any positive cases since we didn't test anyone but we had three suspects who later recovered. But we have known people who have fever and body aches until very recently. We have even known people with ageusia and anosmia but they eventually regain their sense of smell and taste."* (Male, 38, health worker, 2020)

> *"I have heard people say that it is people who travel abroad or who live in Haitian high society who can have and transmit the coronavirus. People know that notables and doctors in the city died of coronavirus without anything being done to save them."*
>
> (Female, 40, civil society, 2020)

Most expressed strong feelings in May 2020 that the pandemic in Haiti was effectively over because of presumed community-wide immunity, lack of visible mortality and that socio-political and economic circumstances demanded people turn their attention away from the "little problem of COVID-19" to more pressing challenges.

> *"Now we are used to Covid and we are not afraid because we have and we know more than Dominicans and many other countries how to solve this little Covid problem … In our opinion, the MSPP and the government were overwhelmed, we do not know why the disease did not attack us massively like other countries. If this were the case, the majority of Haitians would have died of Covid without the state being able to do anything."*
>
> (Female, 44, health worker, 2020)

3.2. Local coping strategies

We found five reasons people gave for why they believed the virus had not caused many severe illness or death cases in Haiti. These were framed as local coping strategies and included: 1) natural immunity; 2) the use of prophylactic herbal teas; 3) interpretations about the existence and/or severely of the virus itself; 4) spiritual protection; and 5) the influence of weather.

Table 2
Traditional teas and drinks used during the pandemic.

1. Beef milk, garlic, leek and a little barbancourt rum
2. Bitter orange, salt, baking soda
3. Ginger tea
4. Lemon, honey syrup, onion
5. A spoonful of honey syrup per day
6. Saffron and ginger tea
7. Garlic, onion, ginger, parsley, saffron, aloe, lemon, and honey juice.
8. Ginger, lemongrass, bitter tea such as mugwort and Artemesia vulgaris.
9. Aloe and honey syrup
10. Drinking a piece of aloe on an empty stomach
11. Clove herbal tea
12. Lemon tea
13. Onions

The first involved the idea that Haitians had avoided severe disease because of their 'strong' immune systems, sometimes linked to being of African descent: "*Blacks can't get Covid; only whites.*" Many respondents mentioned that Haitians are 'adapted' to dealing with many infectious diseases.

> *"Haitians can survive microbes. They can't touch us. We are used to germs … It was believed that the coronavirus was not intended for the Haitian people because if the Covid was intended for Haitians the population would have almost disappeared."*
>
> (Female, 66, civil society, 2020)

The second was the use of tea folk treatments, which were ubiquitous in Grand'Anse (Table 2). This was practiced by all social groups and viewed as a major reason why people did not get sick. During the 2020 lockdown, people took tea several times a day, shared recipes, became itinerant tea sellers and expressed that collecting and drinking tea helped community solidarity.

> *"The tea was used by all social groups to fight against the disease: Medical personnel, political leaders, the old and the young are engaged in a struggle with tea against this disease."*
>
> (Female, 29, nurse, 2020).

A third explanation for the lack of mortality questioned the official narrative about the severity of the virus. In this view, COVID-19 was frequently considered a "rumor" or even "invention" that did not really exist, or at least not in the way that it was presented to the public. If COVID-19 did exist, some reasoned, then why had they not experienced large death counts, especially given the news reports from international media? There was also confusion about why countries with the capacity to fight the virus (e.g. USA) were having the largest mortality. In this regard, beliefs about the virus should also be seen as a type of coping strategy, helping people understand events.

> *"Many people think that Covid-19 does not exist. It's a disease invented by white people. The officials wanted to make money. If the Covid was in Haiti we would see a lot of people dying in hospitals. Some people were afraid but many others had not respected the recommendations made in relation to quarantine because they did not believe."*
>
> (Female, 40, trader, 2020)

A fourth set of reasons was grounded in religious belief. Churches played an important role in spreading information, despite being technically closed during the lockdown. Many respondents emphasized that God had "protected" or "spared" Haiti from the pandemic, given the lack of resources and past history of war, famine and poverty.

> *"People have said that God has mercy on us because He sees what we are already suffering from. He knows that Haitians have no recourse."* (Male, 44, health worker)

> *"We couldn't go out to find food, it was really hard. For everyone this moment was difficult. What can we do about the coronavirus we know we can only resign and pray. In our area, people prayed to implore the mercy of God."*
>
> (Female, 30, civil society, 2021)

A number of participants also mentioned that the pandemic had increased reliance on *hougan* (traditional Haitian medicine doctors):

> *"People go to see the hougan. The latter take advantage of the situation by pointing out that there are deaths in the form of Covid-19 and that they are the only ones able to treat this supernaturally."*
>
> (Male, 44, health worker, 2021)

> *"The hougan had many customers with Covid-19 fever. They say they hold the healing from the Kowona powder shots to zombify people under the pretext of Covid-19."*
>
> (Male, 33, trader, 2020)

A final reason, given by only a few respondents, involved the role of heat and weather in reducing the intensity of the pandemic in Haiti.

> *"The fear had manifested itself in people with comorbidities such as diabetes. I was afraid but I told myself that if I respected the rules of hygiene, I would be okay. I still wondered why people were being infected in the United States where sanitation is high. It was thought that Haiti's temperature could kill the virus and that this decreased deaths in Haiti."*
>
> (Female, 19, trader, 2021)

3.3. Lockdown was viewed as inappropriate to the Haitian context

The early days of the lockdown (especially March, but for some also April 2020) were remembered to be very confusing and stressful times since, in the absence of testing, everyone was assumed to be a potential source of infection.

> *"[Lockdown] means watching yourself everywhere; husbands are afraid of their wives if they cough; women are afraid of their husbands if they cough; even children are afraid of their mother if she coughs. This situation is really difficult."*
>
> (Female, 22, health worker, 2020).

> *"Sometimes [if medical staff] noticed a suspected case, they could run away from the facility … We did not see any institution really supporting the Covid-19 response … [MSPP] could not do anything because they did not have enough medical supplies. A doctor even recommended that people not to come to his clinic. Medical staff would have died in large numbers [if the virus had been more deadly] because, in many health institutions, they were not even wearing masks and complying with measures recommended by MSPP."*
>
> (Male, 34, health worker, 2021).

However, compliance with lockdown measures was widely considered to be difficult, if not impossible, in Haiti. There was a large variation in how much people tried to keep these rules, with some making large sacrifices to do so for the four full months of national lockdown, while others completely ignored them. All respondents stressed that lockdown rules were, in general, not possible to follow for most households. Rules were broken, bent and followed selectively or only for the first month. People did report limiting their movements but tended to remain in contact with neighbors and gather in their yards together; many reported practicing some social distancing rules. Young people continued to meet in small groups and were believed to be less likely to follow restrictions. The need to work and feed their families was the most common reason given for breaking lockdown rules.

> *"The lockdown required us to stay at home [and] brought suffering to us. I have to go to the garden to look for something to live on while everyone is asked not to go out. People in America can stay at home, but we can't here."*
>
> (Female, 38, civil society, 2020)

> *"People did not follow the lockdown rules. They took care of all their normal activities such as working in other people's gardens and going to the evening programs organized by the disc jockey parties for young people … fun activities have not been modified for young people."*
>
> (Male, 35, trader, 2021)

There was confusion about how to practice social distancing in households with many people living together. There was little information or public discussion about how to shield the elderly and most vulnerable, and we did not find any evidence that community shielding as an alternative to lockdown and restrictive NPIs were part of any official health messaging about COVID-19 in our study location. This was despite the fact that nearly all participants acknowledged it was the elderly, immune-compromised and those with comorbidities that were disproportionately at risk of severe COVID-19. By May 2020, most medical and development organizations had begun winding down their COVID-19 clinics, outreach and education.

In our May 2020 interviews, all respondents emphasized that very few people were practicing personal protection measures. This did not change in our 2021 interviews.

> *"After lockdown, the church enforced the rules on social distancing and the wearing of masks only lasted a short period. Everyone has already forgotten the rules."*
>
> (Male, 27, trader, 2020)

> *"The areas no longer have any washing point. Even some hospitals are no longer concerned with the disease."*
>
> (Male, 45, trader, 2020)

Most believed the pandemic was no longer a priority and paled in importance to larger socioeconomic conditions and the ongoing political crisis.

An additional example of local COVID-19 control practices, informed by the experience of lockdown itself, was masking. Most respondents believed that community masking was very low throughout 2020 and 2021, mostly restricted to offices and banks. Distribution of masks did not take place in Grand'Anse, although some political leaders and NGOs did give out limited supplies and small traders and seamstresses sold cloth masks in the early phase of the lockdown. People expressed confusion about the mixed messages from the United States about masks, where early recommendations were against community mask use. Respondents noted that most people did not wear them properly, that many wore dirty masks and that many people reported being unable to tolerate masking, feeling a sense of discomfort and difficulty breathing. Surgical masks also had symbolic value: they were seen as a symbol of wealth and status and an entry passport for many institutions.

> *"Some people started wearing masks at a certain time but stopped wearing them very early. Today we can count on the fingers of one hand those who still wear them. People wear masks to enter public offices and banks until now."*
>
> (Male, 38, trader, 2021).

3.4. Lockdown was considered socially harmful

All respondents stressed the negative consequences of the 2020 lockdown. We identified seven consistent areas where people believed the four months of national lockdown had caused harm to many individuals and households. Respondents emphasized that the lockdown disproportionately harmed the poor; those with money and goods were able to better adapt.

The most commonly mentioned impact was access to food. Restrictions were constantly related to hunger and the potential for famine. Markets were open irregularly and food distribution from Port-au-Prince and imports from Dominican Republic were blocked. Prices of rice, peas, spaghetti and bread become unaffordable for many households. A strong and consistent finding was that people felt more afraid of dying from hunger than COVID-19, although a few mentioned that they were able to stock-up on food stores.

> *"In terms of food, almost everyone suffered, we could not find the food products that the population usually consumes since they are imported … The rising prices of basic necessities had impoverished the population to the point that many people could not eat. So far we have not been able to recover from an economic point of view. "*
>
> (Male, 40, trader, 2020)

The lockdown constrained cash circulation due to closing businesses, increasing unemployment and reducing demand for all economic goods and services. This was believed to have destroyed many small businesses, petty traders, impoverished farming households and created large amounts of debt. Households had to rely on their meager savings or take out loans from banks or loan sharks. Meanwhile, respondents felt that lockdown benefited a few large businesses able to sell their large stocks at higher prices.

> *"For me, quarantine means perishing in place because, the poor man that I am, cannot respect quarantine; it is in the street that I have to find food. Containment is a way the wealthy keep small retailers at home to eat up all their petty cash while big traders make a lot of money to get richer. The period [of Covid lockdown] disturbed everything without a plan. Everyone's living conditions have gone down. We do not have access to the most basic needs."*
>
> (Male, 39, trader, 2020)

> *"We couldn't hold on, we ate everything we had and so far we can't resurface ….This disaster has set us all back to zero when it comes to the economy. We still worked the land but we couldn't sell certain perishable products … the worst is that this situation still lasts. Some were forced to sell what they owned to honor their contract with the bank."*
>
> (Female, 49, trader, 2020)

Markets closed or sold fewer goods at higher prices; teacher and state salaries were not paid; banks ran out of money and closed, and online money transfers were disrupted. Respondents mentioned that remittances from the United States, a normal safety net during times of crisis for many households, reduced significantly because of similar economic problems with relatives overseas. Financial assistance was promised by the government (a meager 3000 Gourdes, or $30), but very few people testified to receiving it and it was reportedly never distributed. Travel was significantly reduced and basic goods such as charcoal and propane gas were almost impossible to find. Unlike with natural disaster, no humanitarian response was mounted as NGO organizations reduced their operations.

A third impact of lockdown related to school closures; school were closed for five months during the 2020 lockdown and reopened in August 2020; this occurred just after schools re-opened from months of closure during the 2019 *Peyi Lòk* (political lockdown). Comments about the impact of school closures did not emphasize lost student performance but rather the sense that closures were unfair since the virus was believed to have already spread widely in the community.

> *"The state closed schools, public places, nightclubs and restaurants but in the end it was only the schools that remained closed. Many parents could not feed their families which caused delinquency among many young people."*
>
> (Female, 42, trader, 2020)

> *"The big schools gave online lessons but the population is not prepared for lack of electricity, internet, and even food at home. Most cannot afford a computer or a smart phone, not to mention the Internet."*
>
> (Female, 33, trader, 2020)

With schools closed teenage pregnancies were believed to have increased, partially due to young girls looking for income and food and being absent from class. FouAll respondents stressed the negative conser respondents mentioned knowing girls who they believed had became pregnant due to the lockdown; these girls were unable to return to school once they re-opened.

> *"Parents don't find the usual odd jobs young girls seek to eat on their own bringing an unwanted pregnancy home at the same time … several young girls were unable to return to class when schools reopened after lockdown."*
>
> (Female, 41, trader, 2020)

There were also many expressions of boredom especially for those without electricity. Families were reported to have experienced stressful times with some indications that domestic violence had increased. However, others reported that the lockdown was rewarding, as people spent more time together. One result of the lockdown was a general increase in anxiety and anger among the public at the state and civil institutions, which participants believed had contributed to increased violence, social instability and vigilantism behavior among young people after the lockdown ended.

Finally, participants in our interviews stressed that community members were afraid to go to health facilities during and after the lockdown because they were viewed as sources of infection and that the health system encountered major staff shortages during this time. Main hospitals were open, although people reported few patients came, outside of emergency cases. People also had less money, and this was believed to have influenced health-seeking behavior. Respondents noted that they believed COVID-19 had adversely affected childhood immunizations and the control of malaria because of the reluctance to seek testing and the similarities between malaria and COVID-19 symptoms. This echoes results from Celestin et al. (2021), who found drops in HIV care and antiretroviral treatment across 96 Haitian health facilities during the lockdown. A few respondents believed that this continued to affect access to medical care and health seeking behavior in 2021:

> *"Of course, Covid had a negative impact on health care, many people accused health institutions of colluding with the government and foreigners to inoculate them with the coronavirus. On the strength of this they refused to seek care even in serious cases, they said "pito nou lèd nou la" which means: It is better to be present sick than to die."*
>
> (Male, 31, health worker, 2020)

> *"The health institutions were little frequented. Only emergencies came there but the staff was available. The population was very afraid to visit the health center. Until now they think that the health personnel can contaminate them with Covid-19. Recently [December 2021] There was an epidemic of fever and flu which reinforced the fear at the level of the communal section."*
>
> (Male, 44, health worker, 2021).

3.5. Lockdown was believed to have been "imposed by political elites"

Respondents also emphasized that they believed lockdown policies represented an inappropriate policy response in Haiti that had been "*imposed from abroad.*" Lockdown was strongly interpreted within the

ongoing political crisis: not so much as health policy but as a political approach to further consolidate power and money by the ruling elite. This type of explanatory framework is common in Haiti but was reinforced by the experience of COVID-19 infection, lack of visible mortality and the range of social harms created by the wide-ranging lockdown policies.

The pandemic generated significant rumors as people attempted to interpret events, including rumors that case numbers were inflated for the government to make money, nefarious collaborations between the US and Haitian governments, that hospitals were deliberately killing people and should be avoided, that the virus was part of a war between "the big countries" (USA and China) who were deliberately spreading it and that the virus was being spread to reduce the world's population. However, it is hard to tell how widely these rumors were believed since in most cases participants discussed them in general terms: "people say …" or "there are people that say …."

> *"The president was happy to ask everyone to stay at home, but people in the area thought he was only playing politics to prevent them from organizing protests … The president very often brings up nonsense that you cannot believe. The state had promised to give financial support that seemed to be available to support friends. The people never got anything … Now Haitians don't care about Covid … Banditry occupies the minds of people in the area because communication with other departments is difficult, if not impossible."*
>
> (Male, 19, trader, 2020)

> *"The government wants more people to die because it knows it will receive more international aid because that is always the way it has to raise money on behalf of the people … the government is not happy because the country has not registered enough cases of the coronavirus."*
>
> (Male, 29, civil society, 2020)

The disjunction between media reports, the severe public health response in the form of unprecedented lockdowns and the small case count was confusing and contributed to alternative explanations for the crises:

> *"There is confusion why countries with the capacity to fight Covid are the countries having a problem with Covid."*
>
> (Female, 30, civil society, 2020)

This had an influence on public perceptions of the COVID-19 vaccines as well, which became available in Haiti in July 2021. Vaccines were viewed with strong suspicion by our study respondents and, as reported, by the wider community. They were also viewed as unnecessary given the perceived high prior infection rate but also interpreted within a wider sphere of suspicion and distrust regarding the state's handling of the pandemic and the political crisis. For example, a rumor continued to circulate in 2021 that there was a "good vaccine" for northern countries and a "bad vaccine" for poor countries intended for depopulation. The emergence of mandatory vaccination around the world also appears to have influenced popular suspicions.

> *"Vaccines have been widely opposed … People who accept [COVID-19] vaccination do so for reasons other than health."*
>
> (Female, 41, trader, 2021)

> *"Vaccines have also reduced attendance at institutions. Many people feared being vaccinated without their knowledge. Covid is having a negative impact on all aspects. We also sense hypocrisy at all levels. The MSPP knows the problems and hides the truth."*
>
> (Female, 55, trader, 2021)

4. Discussion

This study explored lived experiences and perspectives of the COVID-19 pandemic from one department of rural Haiti, with a focus on lockdown. Overall, our informants questioned the mainstream biomedical narrative about risk, the necessity of lockdown and adverse societal effects from NPIs. Here, we outline five implications of this analysis for the broader policy debate about the benefits and costs of lockdown in low-income countries (LICs).

Our first point involves the nature of compliance in LICs. Interestingly, the *Oxford* COVID-19 *Stringency Index* shows that NPIs in Haiti were stricter than in the United States, from March–July 2020, and with measures remaining in place until 2022 at 50% stringency (https://ourworldindata.org/covid-stringency-index). This represents formal rules rather than how rules were actually enacted in crowded Port-au-Prince or rural Grand'Anse. To our knowledge, no study has been published on community compliance to COVID-19 measures in Haiti although, in line with our research, anecdotal reports suggest they were low, selective and arbitrarily enforced by police and transport authorities (Fujita and Sabogal, 2021; Rouzier et al., 2020). Informants in our study reported a wide range of different levels of (non) compliance and questioned the appropriateness and effectiveness of lockdown, associating their concerns with a long history of distrust towards government, corruption, poverty and vulnerability. Initial concern about the virus had largely dwindled by our May 2020 interviews, although physical distancing measures remained in place. White-collar workers may have been able to stay at home but the vast majority of Haitians depend on mobility and transport freedom to secure basic livelihood necessities. Studies from other countries support these findings (Braam et al., 2021; Durizzo et al., 2021); most LICs relaxed lockdown in mid-2020, due to social and economic hardships (Birner et al., 2021).

In societies without social welfare systems, the state can hardly expect millions of people to have their access to food and income severely disrupted for months (Foli and Ohemeng, 2022). In many countries, initial input from civil society to mitigate social harms within national lockdown policy frameworks was minimal (Ridde and Faye, 2022). Our research found that participants in rural Haiti considered lockdown to be ineffective at controlling COVID-19. This raises some important questions: did national authorities believe that stay-at-home orders would be followed consistently and by what proportion of the population? At what level of compliance does a lockdown have no effect on the spread of a respiratory pandemic virus? What are the long-term consequences of ineffective lockdowns on public trust in medicine and government?

Our second point pertains to public understanding and experience of risk. Haitians and others in LICs were right to be concerned about the possibility of mass mortality from COVID-19 in March 2020. A previous study reported only 124 intensive care unit beds and 64 ventilators in the country (Losonczy et al., 2019). Haitian health system preparedness is at the bottom of global assessment reports (Faure et al., 2022). And yet Yves (2020) reported that more than half of COVID-19 cases refused to be hospitalized after diagnosis and that treatment centers closed due to lack of patient admissions and problems paying staff on time. Informants in our study strongly believed that COVID-19 mortality was low and clustered among higher-income groups. As with other LICs, and indeed other epidemics (Abramowitz et al., 2015), people questioned the global crisis narrative that justified lockdowns (Green, 2021). A recent excess mortality study found that LICs have had the lowest excess mortality rate of the pandemic (Wang et al., 2022). Haiti is near the bottom of this list, despite having one of the world's lowest vaccination rates (1%).

Our study found that people in Grand'Anse, Haiti, associated this low mortality rate with: the strength of people's immune systems, widespread use of natural prophylactic folk teas, spiritual protections, the low mortality burden of the virus itself and tropical weather. Other studies have emphasized the demographic age-structure of LICs as the main causal factor (nearly 65% of Haiti is under 25 years old, average life-expectancy is 64) as well as pre-existing immunity from co-circulating viruses, the built environment and time spent outdoors (Adams et al., 2021; Alon et al., 2022). We found a widespread belief that population immunity to COVID-19 had developed rapidly during

the early months of the pandemic in Haiti, with very low mortality. Existing studies, collected from 2020 to mid-2021 in Haiti, found sero-prevalence of 17% (infants), 29% (inpatient samples) and 39% (adults), broadly aligned with other countries at the time (Tagliamonte et al., 2021; Price et al., 2022; Louis et al., 2022).

Our third point relates to options to improve future respiratory pandemic responses in LICs. The negative attitudes towards lockdown found in our study, as well as masking and COVID-19 vaccination, suggest that future control of respiratory pandemic viruses will encounter substantial resistance in Haiti. This situation may change if hospitalizations and mortality are visible at a community level. But even if this occurs, lockdowns will remain fraught with ethical, social and political trade-offs since social protection systems are non-existent in the country. In such contexts, a *shielding* or *focused protection* strategy that prioritizes social distancing measures around high-risk groups is much more appropriate (Ioannidis, 2021). Qualitative studies from Sudan and Ethiopia found that shielding was viewed as an empowering approach that harnessed existing communal African values while protecting against the social harms of lockdown and other NPIs (Abdelmagid et al., 2021; Estifanos et al., 2020). In Haiti, we found no evidence that shielding was promoted; rather, the focus was largely on hand washing, masks and advocating for sick individuals to go to the hospital if they showed symptoms (Fujita and Sabogal, 2021). This should be reconsidered for future pandemic plans.

Our fourth point involves the top-down nature of lockdown policy-making, which followed an unprecedented global policy 'domino-effect.' This occurred against a pre-pandemic consensus that we should mitigate social disruption in our collective response to a respiratory pandemic virus (Inglesby et al., 2006; WHO, 2019). But once March 2020 lockdowns began in China, Italy and the United States, it was politically difficult for LICs to not follow them; successive governments risked reputational damage for not keeping step with the rapidly emerging policy consensus (Green, 2021), which was based on models from high-income countries and biomedical expertise (Rajan et al., 2020). Yet, because the age-based distribution of global COVID-19 mortality was known early on, lockdown was not warranted in Haiti and top-down policy became associated with resistance and resentment. Our study found that most participants believed pandemic restrictions were ineffective, not appropriate, driven by political interests and were socially harmful. In line with other quantitative and qualitative studies (Bardosh, 2023), Haitian participants reported multiple, negative social harms in food security, income, education, health, and psychosocial wellbeing.

Not all LICs enacted lockdown measures (e.g. Nicaragua and Tanzania). Widespread concern about food security, economic collapse and social unrest played a major role in public policy debates in Africa (Birner et al., 2021). Future studies should evaluate and compare the health and livelihood results across different LICs. As we found, this raises uncomfortable questions about the responsibility of political elites, policy advisors and global agencies that advocated for these policies.

Our fifth point concerns challenges of understanding the impact of lockdowns in fragile states with systemic vulnerabilities. While high-income countries begin to consolidate research studies, the consequences of pandemic policies in places like Haiti will remain obscure. A study across seven conflict areas in 2020 (including Haiti) noted that lockdowns were used by governments to strengthen their control and agendas and *may* exasperate existing political conflict (Hilhorst and Mena, 2021). Lockdowns have since been used in Peru and Sri Lanka as part of government efforts to stop protest and political organization. The situation in Haiti is complicated by multiple pre-pandemic crises. *Peyi Lòk* (political lockdown) preceded pandemic lockdowns in 2019 (Blanc et al., 2020; Blanc and Pierre, 2021) and, in Grand'Anse, a devastating hurricane struck in 2016 and an earthquake in 2021. Distrust in government reached an apex in 2018, due to allegations of massive government corruption and embezzlement in the PetroCaribe scandal. A constitutional crisis, soaring inflation and rising food insecurity, malnutrition and hunger accelerated during the pandemic period. A retreat of the state to gangs and vigilantism has only increased in the post-pandemic period, culminating in the assassination of President Moise on July 7, 2021. This raises the question: is it possible to isolate one overlapping crisis from another in fragile states?

In Haiti, the word 'crisis' (*kriz*) denotes the embodied social and psychological experience to trauma, loss, spiritual possession or seizures (Polyne, 2013). *Kriz* is a rupture in the functioning of body and mind, creating greater susceptibility future illness or death. Previous historical *kriz* (colonialism, Duvalier dictatorship, 2004 coup and 2010 earthquake) laid the groundwork for the public perceptions and experiences we found here. And yet others have advanced a more optimistic position. Blanc et al. (2020) hypothesized that prior natural disasters and crises have facilitated psychological resilience in Haiti that helped buffer negative effects from the pandemic. We did not explore mutual aid in any substantive way during our interviews, although solidarity and social service outreach have long been a common part of rural social life in Haiti.

In conclusion, the view from rural Haiti questions a number of normative assumptions about COVID-19 pandemic policies related to compliance, effectiveness, risk, governance, social harms and the nature of vulnerability. Our research suggests that alternatives to lockdown and restrictive NPIs, such as shielding the most vulnerable, are likely to be a more appropriate strategy for future pandemic respiratory viruses in fragile states.

Data availability

The authors do not have permission to share data.

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