COVID 19

Adaptation Strategies of Residents of Multi-Family Housing in Lagos

Centre for Housing and Sustainable Development, University of Lagos

Edited by:
Timothy Nubi, Basirat Oyalowo, Taibat Lawanson

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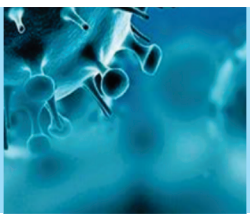

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Dedication

To all those who served on the frontlines, in their communities, against the spread of COVID-19: educating, learning, advocating, supporting and providing succour.

Acknowledgement

The authors gratefully acknowledge the support of the Arts and Humanities Research Council (AHRC) of the UK Research and Innovation. Chapters in this book are drawn from the research project entitled '**A Study of COVID-19 Adaptation Strategies for Residents of Multi-Tenanted Housing in Lagos**, which was funded by the Arts and Humanities Research Council (AHRC) of the UK Research and Innovation (UKRI) Councils under the "AHRC GCRF URGENCY GRANTS".

Foreword

The book, Covid-*19: Adaptation Strategies of Residents of Multi-Family Housing in Lagos*, is a research outcome of the AHRC GCRF Urgency Grants funded by the Arts and Humanities Research Council of the UK Research and Innovation.. The Centre for Housing and Sustainable Development, University of Lagos, and its multi-disciplinary team of researchers put together a book that touches the heart of a global pandemic whose impact spread from health to the social and economic fabric of the world. With cities locked down, massive infrastructure for commerce, industry, education, governance, and entertainment remained idle for months.

The rapid spread of COVID-19 across the world brought alarming concern for Africa's vast population of dwellers in informal communities. The home became the place for work and leisure, sickness and treatment. The value of this book lies in its attempt to create a bridge between what was known about pandemics in the past and how we can deal with the present to be resilient for tomorrow.

This anxiety was understandably fuelled by the risk factors for infectious diseases evident in African cities arising from poor management of rapid urbanisation, rapid spread of informal settlements, and the limited provision of basic infrastructure and services. In this book, the authors present a big picture of concern about the spread of the virus in the dense city of Lagos, Nigeria. Each team member wrote from the standpoint of their specialisations, which is reflected in each chapter. Despite this, the chapters are written in simple language that can be easily understood by readers across disciplines and interests. Chapters present an historical analysis of the adaptation of residents of multi-tenanted housing to epidemics in Lagos and lessons learned, using an interesting parallel between the aftermath of the colonial government's management of the Spanish flu in 1918 and the COVID-19 pandemic of 2020. The book also attempts to deepen awareness about the role of audio and visual arts in helping residents adhere to public health measures, drawing an analogy between the role of the '*Artibiotics'* of the creative arts in lockdown situations. An exposition of lessons from literature in coping with infectious disease outbreaks in slum communities in cities like Lagos, based on the fictional work of Maik Nwosu's *Invisible Chapters* and the non-fictional work of Grant Fuller's *(Fever!)* offered a strong narrative of the spread of Lassa fever in Nigeria in the late 1960s. A final chapter explores the identification and communication of coping strategies that can be the basis for advocacy for residents of multi-tenanted housing in Lagos and other cities grappling with similar problems. Each of the chapters reflects challenges, solutions, and most

importantly, hope; that in the pandemic, lessons have been learnt to foster better housing, social infrastructure, and participatory processes as the basis of managing fast-growing urban areas. I am proud to be associated with the Centre for Housing and Sustainable Development and offer this book as a contribution to knowledge about COVID-19 in Africa as well as a direction for more a beneficial urban management process for policy and practice.

Professor Oluwole Familoni
Deputy Vice Chancellor (Academics and Research),
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Chair, Advisory Board,
ARUA CoE Urbanization and Habitable Cities

Preface

Since the COVID-19 pandemic was pronounced by the World Health Organisation in March 2020, the world has witnessed unprecedented changes in the way nations, cities, sectors and households manage their health, economic, social and recreational circumstances. As researchers in a bustling city of over 19 million people, the discovery of an index case in Lagos in February 2020 was a source of serious concern. Rapid population growth and densely populated communities, which interact daily through waves of formal and informal activities, made Lagos the inevitable epicentre of the pandemic in Nigeria. As the State Government set into motion lockdowns, restrictions in movements, ban on public gatherings and school closures, among other measures, it was clear that the home was the designated place of refuge, and messages bearing the phrase "Stay home, Stay Safe" were the simple direction for preventing contagion.

Unfortunately, these messages left out large portions of the population who could not afford to "stay home" because the home and its microenvironment presented manifold risks. Residents of low-income, multi-tenanted housing in informal communities, run-down public housing, inner city cores, and other manifestations of slum living are made vulnerable to the spread of infectious diseases by the very living circumstances that are now being advertised as a place of refuge. It was to this disenfranchised group that we turned our attention in the study that resulted in this book. Using Lagos, a veritable urban laboratory, as a case study, we had the central aim of investigating and proposing realistic coping strategies for protecting residents of multi-tenanted housing, using a rapid research design and communication of research results.

Rather than being led by medical science, we developed an arts-led interdisciplinary research method, weaving in literature, creative arts, and music with housing issues in data collection, analysis, output design, and dissemination. Our research team was drawn from the University of Lagos, Nigeria and Durham University, UK. I had the singular honour to lead the work that attracted researchers from the Creative Arts, History, Music, Urban Planning, Real Estate Management, Regeneration and English Language. We established four distinct work packages, each focused on a disciplinary approach that produced findings that interlinked to present a unified voice that called for the integration of participatory approaches to public health messaging, strengthening local governance, and instituting preventive home improvement interventions in informal communities. As there are comparable conditions of dense, substandard housing in most developing world cities now

facing the pandemic, we are convinced that the recommendations we have made would be adaptable to other cities in Africa and the global south.

I must appreciate the Arts and Humanities Research Council (AHRC) under the Global Challenges Research Fund (GCRF) of UK Research and Innovation, through which this research was funded. The Urgency Grant was a most welcome intervention that enabled the interrogation of profound societal problems and provided an unusual but very important opportunity to disseminate research findings as they unfolded. The COVID-19 pandemic was a situation that required this urgency in response, and we are deeply appreciative of being award winners.

I must also appreciate the partners who were involved throughout the project, and participants in our outreach programmes and dissemination workshops. Some of these include: the Nigerian Slum/Informal Settlement Federation, the Lagos State Urban Renewal Agency, FESADEB Communication Limited, the Lagos State Ministry of Health (the State Epidemiologist) and the Lagos State Ministry of Physical Planning and Urban Development, The Guardian Newspaper, YABATECH FM, Radio Nigeria (Bond FM/Radio One FM), Akede Oodua Publications Limited, Nigeria Info, Wazobia FM, Cool FM, UNILAG FM, WFM (The Voice of Women). The Head of Departments of Co-Investigators at the University of Lagos– Estate Management, Building, Urban and Regional Planning, Quantity Surveying, Architecture, Creative Arts and History and Strategic Studies are also appreciated, Ms Hellen Amito of Makerere University, Uganda and Dr. Emmanuel Abbey from University of Ghana, all attended dissemination meetings and we learnt from their input.

We recruited a crop of young research assistants who supported the project; they represented diverse disciplinary training: Abimbola Thomas, Gbenga Isaac, Elizabeth Ojo, Kehinde Sodipo, Ademola Adekeye, Genevieve Ogu, Gloria Okolie, Nzube Nlebedim, Samuel Dowole, and Olajide Balogun. They contributed in no small way to the actualisation of this project.

The University of Lagos Management, led by Prof. Toyin Ogundipe, and the Research and Innovation Office, led by Prof. Bola Oboh, were very supportive, providing institutional support to ensure this project reached its stakeholders even during the lockdown periods. The Centre for Housing and Sustainable Cities, including Dr. Taibat Lawanson and Dr. Basirat Oyalowo, as well as Centre Secretary, Toyin Adeniyi and Project Admin Officer, Mofelola Olayanju, enabled the project to stay on track.

Finally, it was excellent working with Prof. Michael Crang, of the Centre for Visual Arts and Cultures at Durham University, UK, who provided thorough procedural support but regrettably was unable to travel to Lagos to join us in the wake of severe travel restrictions. Prof. Taibat Lawanson, an urban planner and pro-poor urban management expert, guided us with her profound expertise towards always collaborating with communities as a fundamental research strategy. Dr. Basirat Oyalowo, housing studies expert who managed the grant writing and implementation process, brought in her expertise in mixed methods research while also developing an innovative research design that leveraged our previous collaborations for the successful completion of this project. Dr. Lola Akande, an award-winning writer and academic from the Department of English Language, brought out the realities of life from the fictional depictions of slum evictees to provide the conscience of this book, which was also very much complimented by Dr. Frances Odueme's non-fiction, literal capture of a previous epidemic situation in Nigeria. Dr. Florence Nweke, whose passion for the role of music in coping with life occurrences enabled the conversion of long pages of texts into memorable public health messages in the form of animated cartoons and jingles. Dr Felix Ajiola's specialisation in urban history enabled us to dig into the past of epidemics in Lagos and learn from that history, the successes and failures of previous policy approaches, and the context surrounding them. For me, this project provided a tremendous opportunity to approach urban problems not only from the urban regeneration, real estate, and housing development specialisations that I come from but also learn and teach the value of multiple approaches to solving complex urban problems.

We present to you, then, aspects of our research project captured in five chapters reflecting the objectives of our work. It is our profound hope that it will be of value to communities, academics, policymakers and scholars across all disciplines that are concerned with urban health and urban management, in African cities and beyond.

Timothy Gbenga NUBI
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Chapter 1

TACKLING INFECTIOUS DISEASE MANAGEMENT THROUGH MULTIPLE APPROACHES

Basirat Oyalowo, Taibat Lawanson, Timothy Nubi, Micheal Crang

African Cities and the COVID-19 Pandemic

The coronavirus pandemic has been described as the worst public health crisis in the century (UN-Habitat 2020). It has also triggered an unprecedented focus on the city as local economies have suffered the impact of measures to contain the spread. Partial and complete lockdowns have led to closed offices, shops, malls, and entertainment centres in all parts of the world. International travel and the commerce of tourism were grounded, with immense economic consequences. With inadequate health facilities to cater for hospitalisation, attention shifted from hospitals as care centres to homes as the safest place for work, schooling and safety from the spread. The most critical interventions in the early months of the pandemic were non-pharmaceutical measures captured through public health messages that gave instructions to practise regular handwashing and exhortations to stay at home.

The pandemic started as an urban phenomenon as major cities became the epicentres. The World Cities Report (2020) predicted that the shrinking of the global economy will mean less funds for urban development projects like water, sanitation, public transport systems, adequate and affordable housing, slum upgrading, poverty eradication, and healthcare improvements. The decline in revenue was projected to hit developing-world cities the hardest due to existing gaps in healthcare and other critical infrastructures. The economic crisis arising from the pandemic is therefore also critical, with over 71 million people estimated to be pushed back into extreme poverty in 2020 with the worst economic prospects since the Great Depression (UN-Habitat, 2020). Housing's fundamental linkage to good health, well-being and economic development is evidenced by its inclusion in the Sustainable Development Goals (Goal 11.1), which target access to adequate, safe, and affordable housing, basic services,

and slum upgrading. Its linkage to preventing, containing, and managing infectious disease outbreaks is therefore very clear, and ignoring that linkage could lead to ominous consequences for millions of people who live in substandard housing across African cities.

The risk factors for infectious diseases such as COVID-19 are particularly acute in African cities due to poor management of rapid urbanisation, the spread of informal settlements, and the limited provision of basic infrastructure and services. The UN-Habitat (2020) report observes that as at 2019, about 47% of Africa's urban population lived in slums or informal settlements, which translates to about 257 million across Africa. Lack of access to facilities that help prevent the spread of infectious diseases is evident. For example, only 55% and 47% of Africa's urban residents have access to basic sanitation services and handwashing facilities, and most are exposed to constantly overcrowded conditions. It is against this backdrop that the COVID-19 pandemic emerged and had to be managed, taking into consideration the threat of community spread that placed residents of informal communities in particular, their families, and their communities in a very vulnerable position. Urgent action was required to stem the tide. Lockdowns were immediate responses of the national government. Cities such as Lagos, Accra, Libreville, and Kinshasa were locked down as part of national actions to contain the spread. Border closures and a ban on public gatherings in schools, markets, entertainment, and religious centres were also common national responses in Africa.

In addressing the challenges posed by infectious diseases in the context of such a high proportion of inadequate housing, several city governments took some steps to reduce the rising infection of COVID-19. Some of these were recorded by the UN-Habitat (2020). In N'Djamena, the municipality carried out fumigation and sterilisation of public spaces while the Kampala Capital City Authority set up 29 sites with ambulances to provide transportation for people with health emergencies in response to the interruption of taxi and bus services. In Harare, Zimbabwe, with 60 informal settlements (CAHF 2020), attention was particularly paid to increasing access to water supply for all the suburban population by making water tanks available to municipalities. Cape Town has more than 200 rapidly expanding informal settlements, providing homes to residents in the face of slow provision of formal housing (City of Cape Town, 2019). The pandemic prompted the government to provide deep cleaning of communal areas in informal settlements five times a week by city staff and contractors, in addition to providing water storage tanks to these communities to enhance access to clean water supply (Windapo, 2020). A similar approach was adopted in Abidjan, Johannesburg, and Lagos, where sanitary and personal

protective equipment were distributed to communities, social workers, and health centres. Expectedly, the housing situation in informal communities seemed to be the Achilles heel in attempts to slow the spread of COVID-19, yet purposeful interventions to improve housing conditions, such as upgrades and home improvement or neighbourhood amenities, were not widely recorded as having occurred.

Responding to an Endemic Research Problem

In the campaign to keep safe against the spread of the pandemic, the early interventions were practising regular hand washing, social distancing, keeping safe at home, and self-isolation (the lack of hospital beds implied this to be done at home). Our research was motivated by concern about the capacity of residents who resided in multi-tenanted housing in low-income residential neighbourhoods, informal communities, and slum communities to adhere to these instructions in an environment characterised by an endemic lack of basic amenities and overcrowding. This concern is found in the similarity of housing contexts in many African cities.

The case of Lagos is particularly onerous. The Lagos State Government suggests that 75% of its 20 million inhabitants (according to 2011 estimates of the Lagos Bureau of Statistics) live in substandard housing, characterised by overcrowded housing units with a lack of potable water, indoor cooking, and sanitary facilities, among others. Exemplars of these deficiencies are multi-tenanted (or tenement) housing, which are houses made up of single-room apartments with all tenants sharing common areas such as kitchens, bathrooms and toilets. Rooms (sometimes exceeding five) are designed to face each other with a narrow corridor separating them. Each room is usually occupied by a family unit comprising up to five individuals and in some cases, more. This means a combined population of close to 50 people per building, sharing three to four outdoor toilet/bathing facilities and two kitchens. In low-income neighbourhoods, multi-tenanted housing is owned by private landlords and represents the most affordable form of rental housing for the low-income. They are the subject of many local TV series in view of the tensions amongst residents and are also called ‘Face-me-I-face-you’ buildings or, more colloquially, ‘Face-me-I-slap-you’ buildings in view of the tensions that arise from living in such close quarters. They are therefore crucibles of problems associated with overcrowding, lack of privacy, and basic facilities.

We were also motivated by the remarkable silence on coping strategies for these people in both state and federal governments as well as the Nigerian Centre for Disease Control’s (NCDC) directives on COVID-19 protection. As Lagos is not alone in addressing the challenges associated with housing

inadequacy and health, an in-depth study of the city offered an opportunity to provide answers that can be useful to other cities with so much similarity in housing contexts.

Thus, our research had the central aim of investigating and proposing realistic coping strategies for protecting residents of multi-tenanted housing from infectious diseases, using a research design that could be urgently carried out, incorporate unfolding dimensions, and also be rigorous scientifically.

The major challenge we faced was in designing a participatory research process that enabled safe access to people, taking into consideration the precarity of the global and local situations at the time the study was conducted. The world has, however, suffered from pandemics before COVID-19 and has been able to, with varying degrees of success and mortalities, contain the spread. This made learning from history imperative, communicating with survivors important, and taking lessons forward a critical step. The rest of this chapter presents how we dealt with this challenge and the lessons to take forward.

Given the urgency of the situation throughout the course of the pandemic, it was also important that research outputs be disseminated urgently as they emerged to the people who are made vulnerable by their living conditions. At the same time, we faced, throughout the project, state restrictions on physical gatherings that prevented in-person meetings, both for the project team and with potential respondents in the community. This influenced our choice of a multidisciplinary team with expertise in non-contact research and the ability to convert to the same.

The urgency grant of the Arts and Humanities Research Council of UKRI was particularly suited for the study because of its emphasis on short-term, impactful projects that provide solutions to critical development challenges. The grant's support for creative, non-academic outputs such as jingles, spoken words, and graphics also made it very appropriate for the project. Ethical clearance was obtained for the research from the College of Medicine of The University of Lagos Health Research Ethics Committee with every co-Investigator taking and passing courses on Social and Behavioural Research on the Collaborative Institutional Training Initiative. All chapters in this book were subjected to blind peer review by respectable scholars in the field.

Working with multiple disciplines and multiple stakeholders

The research project had four key research questions and objectives that enabled it to interrogate the same issue from a multi-disciplinary perspective.

Chapters of this book are based on some of the findings from these research questions. These are:

Table 1: Research Objectives and Questions

1.	**A historical analysis of the adaptation of residents of multi-tenanted housing to epidemics in Lagos** 1.1 What can be learned from historical policy responses to pandemics as they affect residents of multi-tenanted housing? 1.2 Historically, how did residents of multi-tenanted housing and similar environments cope during outbreaks of epidemics and diseases?
2.	**Examination of the role of audio and visual arts in helping residents adhere to public health measures to help prevent the spread of COVID-19** 2.1 What role did music and graphic arts play in enabling residents to cope with the lockdown? 2.2 What is the role of music and the arts in shaping the affective atmosphere of settlements during lockdown? 2.3 How can music and graphic arts be used to drive attitudinal changes that will enable residents of multi-tenanted housing to cope effectively with COVID-19 prevention strategies?
3.	**Exposition of lessons from literature in coping with infectious disease outbreaks in slum communities in cities like Lagos** 3.1 What lessons can be learned from existing literary works on the effects of the pandemic on residents of multi-tenanted houses? 3.2 What lessons can be learned from the coping strategies of residents of multi-tenanted houses as depicted in the fictional narrative?
4.	**Identification and communication of coping strategies that can be the basis for advocacy for residents of multi-tenanted housing in Lagos** 4.1 What are the coping strategies for safety at home and self-isolation measures taken by residents of multi-tenanted housing? 4.2 How did residents of multi-tenanted housing perceive 'state-led' public health measures and what is the impact of this?
5.	**Rapid production of audio/visual messages and dissemination to residents in known geographical clusters of multi-tenanted housing is necessary to ensure adherence to health messages**

We carried out a historical appraisal of the adaptation of residents of multi-tenanted housing to epidemics in Lagos during colonial times in the 1800s, seeking lessons from history for both attitudinal and policy changes. We

wanted to ascertain how creative arts, especially audio and visual arts could be used to help residents adhere to public health measures. Thirdly, given the role of literature as a means of expressing the writer's concern about underlying socio-political conditions as well as depicting reality, we chose works from both fictional and non-fictional genres. The selected works of literature are Maik Nwosu's 'The Invisible Chapters', a fictionalised account of the impact of Lagos eviction, government indifference, and infectious disease management in a Lagos slum, and Grant Fuller's 'Fever,' an account of the emergence, spread, and containment of Lassa fever in Nigeria. These texts were chosen because they sufficiently dwell on characterisation and plot, which are highly relevant to the research. Then we used mixed-methods research to identify and communicate coping strategies for advocacy in the targeted communities. A final objective was then to rapidly deploy audio/visual messages to disseminate the research findings amongst key stakeholders in the city. Four work packages emerged: WP1 Historical Investigation, WP2 Role of the Creative Arts, WP3 Review of Fictional Literary Works, and WP4 Existing Coping Strategy. As will be clear from the chapters of this book, the work packages are interrelated so they also triangulate with each other.

Underscoring the originality of this research, rather than being led by medical science, the project utilised an arts-led interdisciplinary research method, weaving in literature, creative arts, and music with housing issues in data collection, analysis, output design and dissemination. Data collection could not be safely carried out physically; therefore, virtual focus group discussions with community members, online surveys, radio call-in programmes and social media polls were utilised. At key stages, we worked virtually with recognised community leaders and members, who later led the dissemination of research outputs in their own communities. By combining findings from the historical investigation with online surveys and literary representation, the outputs of the work packages were reduced through the audio-visual and graphic arts to generally accessible forms capable of creating attitudinal changes and policy re-direction in the race against the community spread of COVID-19. Thus, health messages arising from the study were condensed into jingles and aired on local radio and a syndicated television programme in local languages to ensure impact. The focus on non-academic dissemination was therefore integral to reaching the relevant audience.

Importantly, we were able to draw on such theoretical positions as the Pharmaceutical Model, where the arts are conceived as a pharmaceutical product capable of inducing positive changes to mental health, as well as John Dewey's theory of pragmatism with its emphasis on actual experience as a

fulcrum for learning from oneself and others (Riga, 2020; Maddux & Donnet, 2015). Marxist criticism was also deployed in the interpretation of Maik Nwosu's Invisible Chapters, in deference to the interest on how and why the repression of people in the lower class comes about and the need to change what is perceived as gross injustices and inequalities in the social order. Then, interrogating issues through a spatial justice lens enabled us to delve into the need for fair and equitable distribution of socially valued resources and the opportunities to use them (Soja, 2009). In developing an understanding of COVID-19 policies in relation to residents of multifamily homes, these perspectives provided an opportunity to deeply interrogate whether policies have favoured the less privileged in the informal communities and what needs to be done to address the consequences in infectious disease situations, with attention to preventing future occurrences.

The following section, in introducing each chapter of the book, reflects the interconnection between the objectives, the diversity of the methods, and, importantly, the consensual issues that emerged from these interconnections.

Multiple Methods with a Unified Message

The work of Felix Ajiola (chapter two) drew very interesting parallels between the aftermath of the colonial Lagos government's management of the Spanish flu in 1918 and the COVID-19 pandemic of 2020. The archival methodology permitted the identification of containment measures that were practised during that period and became integrated into COVID-19 management. The lockdown measure is a major way through which governments have in the past curtailed the spread of infectious diseases in Lagos. The colonial government restricted movement for several months during the Spanish Flu Pandemic of 1918. Thereafter, in 1924, a similar lockdown measure was also adopted to curb the spread of the bubonic plague. Similarly, in the 1940s and 1950s, when smallpox disease broke out in Badagry, southwest of Lagos, outside its metropolitan area, the measure was also effective in curtailing the spread. Travel restrictions, in particular, were imposed due to a surge in the incidence of the disease during that period. School closures and the installation of sanitation facilities (such as running water and soap) in public and private primary and secondary schools heralded the discovery of the index case of Ebola in Lagos on July 20, 2014. Thus, the lockdowns that Lagos instituted from March to May 2020 were already known to be an effective form of containment.

A second, generally acceptable containment strategy is the isolation of people who have been infected, including those who may have come into contact with infected persons. The colonial quarantine ordinance, which was subsequently

amended to suit the peculiarities of other infectious diseases, was a significant tool used in combating epidemics in Lagos. During the outbreaks of the Bubonic Plague, smallpox, yellow fever and malaria diseases, many people that were sick in Lagos were put in isolation centres. At the time of the Bubonic Plague, in particular, there were strong quarantine exercises in houses in local communities where an individual had been infected. Drastic measures, such as locking people in their homes and giving them antibiotics for up to two weeks, were needed to ascertain that there were no new cases after the discovery of an infection. In recent times, the creation of special government agencies such as the State Environmental Health Monitoring Unit to assist the Lagos State Emergency Management Agency (LASEMA) in evacuating victims of the Ebola virus disease has occurred. Accordingly, the Lagos State Government had created COVID-19 isolation centres across the city to treat and monitor infected persons.

Public awareness and sensitisation have been integral components of adaptation measures against the spread of infectious diseases in Lagos. In chapter three, Florence Nweke provided a very interesting discourse with recommendations drawn from focus group discussions, a radio call-in programme and an online survey to show the importance of the creative arts (with a special focus on music and animated cartoons) in public health messaging as well as coping with extensive restrictions on movements during the lockdown periods. She showed how residents relied on music as a form of psychosocial remedy for being confined. Residents of slums and informal communities readily attest to the versatility of music in public health education in their communities. In recognition of this and following the pharmaceutical model proponents such as Sloboda (2006), the word 'Artibiotics' is coined to reflect the therapeutic role of the arts in lockdown situations in particular. A unique exercise that focused more on human responses as opposed to government actions, the chapter evidenced the composition of jingles and animated cartoons from the project's findings and how these were aired on radio and syndicated television programmes as a form of research output dissemination. These put the project above merely identifying problems and recommending solutions, but also impacting communities through the use of the arts in the dissemination of research findings. Thus, the airing of jingles and animated cartoons on radio and television, which also spread on social media, served as a constant reminder to support the prevention of the disease by adhering to public health messages.

However, public health messaging is not always successfully deployed. In chapter four, Frances Odueme establishes the various ramifications of citizens' reluctance to adhere to messages that are meant to keep them safe from

infectious diseases. Inspired by the harrowing experiences of people in different regions resulting from incessant epidemic outbreaks, writers utilise either fictional or non-fictional literature as a means to express their concern about the underlying socio-political conditions that trigger infections, inhibit their control, and, therefore, engender the spread of these rampaging epidemics. These expressions are to be found in Grant Fuller's *Fever!,* a non-fictional work of literature that offered a strong narrative of the spread of Lassa Fever in Nigeria in the late 1960s and which Frances Odueme reviewed for this study. The choice of John Grant Fuller's *Fever!* is no incident. Its' focus on Lassa Fever, an infectious disease discovered in Borno State, Nigeria in 1960, Lassa Fever remained visible in cities like Lagos until the COVID-19 pandemic overshadowed its reporting, making it an intriguing consideration for learning from the past.

Arguing that non-fictional form renders more poignant accounts as they cite actual locations, name real places and persons, and depict more prevailing and consistent information about lived experiences, Odueme proceeds to render Fuller's accounts of the onset, spread, and containment of Lassa Fever in Nigeria. The importance of understanding local culture and soliciting the support of local hierarchies was shown to be of utmost importance in public health messages. Odueme's analysis revealed the reluctance of Jos residents to allow blood samples to be taken in order to determine infection and antibodies among previous survivors. Distrust of government measures in turn led to the people embracing traditional medicines and religious practises and beliefs. The chapter recounts the despairing attempts to contain the outbreak in the public domain, as people refused to cooperate with public health measures and resorted to self-help measures. The situation became particularly dire as people checked out their infected relatives from the hospital to be treated elsewhere, leading to more widespread infections.

The narrative of distrust of government in infectious disease management is continued in chapter five, where Lola Akande and Timothy Nubi, provide a treatise on the applicability of Maik Nwosu's *Invisible Chapters* to the ongoing pandemic. Maik Nwosu's *Invisible Chapters* was carefully selected for this project because of the close relationship between the concerns of the novel and an actual event in history. The fictional reenactment of the plight of evicted residents of Maroko, a rumbling slum community in Lagos, provides a strong storyline for understanding the pains, dashed expectations, and anti-government reactions of a people literarily on the verge of extinction. In all of this, distrust of government, albeit in the context of slum resettlement and urban renewal was evident.

The real-life circumstances of the plight of thousands of residents of Maroko who were evicted when the community was demolished and their traumatic experiences are documented in both academic and grey literature. As at 2020, the survivors of the Maroko community are still very much alive and unfortunately mostly resident in public estates just as bad as their original locations. Indeed, our research group worked with survivors in a previous project (see Nubi et al., 2019), and the sense of government distrust was still very palpable. Thus, by weaving in various characters and extrapolating his imagination on a real-life occurrence while adding the desperate attempts of local residents to curtail a 'suspicious' disease outbreak in the slum, Maik Nwosu's visualisations become quite real. Issues of government distrust were brought to the fore with a storyline that showed the limitations of government resettlement policy in the much-promised 'New Maroko,' which eventually favoured home-owners rather than tenants, while at the same time highlighting the onerous conditions for accessing the new flats, as is often the case in reality. The chapter enables a look into the dimensions of inequalities in the city, as well as an examination of issues around solidarity, resilience, governance, and health.

In another sense, the chapter highlights the coping mechanisms of people who are already vulnerable because of a traumatic eviction. What then happens to them during an infectious disease outbreak, and what are the implications of this for pandemic management? Importantly, the chapter chronicles older literature that has retold life events as a means of historical documentation, which links well with Ajiola's narratives in chapter two and Odueme's work in chapter four. With another storyline that showed the desperate attempts by residents to contain a disease outbreak, Maik Nwosu showed the lack of government response to the issue (ostensibly due to the low socio-economic class of residents) and the lack of public healthcare facilities at the grassroots. *Invisible Chapters* also echoed the historical evidence in Chapter two and the non-fictional accounts of Lassa Fever in Chapter four, which showed how residents resorted to traditional herbs and religious beliefs as they attempted to protect themselves from the disease. The agency of a strong woman and her role in initiating early response systems was an outstanding feature that Akande and Nubi brought to the fore. The unity of the community in staging a protest march to seek government intervention in housing and low-quality environments helps to show strong social capital in the community and provides an opportunity for engaging with citizens in more effective ways.

The mixed methods employed in the final chapter by Basirat Oyalowo, Taibat Lawanson, and Timothy Nubi, provide evidence for the strength of community networks and solidarity in disease prevention in low-income communities. In

this chapter, decent housing standards are presented as a core necessity for combating infectious diseases. This is a thread that runs through all the previous chapters at some point. In chapter two, Ajiola recounted that the strategic location of an observation hospital in Ikoyi to curtail the spread of the Spanish Flu was an attempt to ensure access to healthcare for those living in nearby congested residential areas. Poor housing conditions were both a cause and effect of the Maroko demolitions, and Akande and Nubi, captured how this was a strong focus for Maik Nwosu's literary re-enactment. Odueme uncovered how, in the months following the Lassa Fever outbreak, it became apparent that people who lived in high-density compounds easily passed the disease along to one another.

Using data collection strategies such as an online survey, a social media survey, virtual focus group discussions, and radio call-in programmes, Chapter six provides evidence that housing conditions remain inadequate, gaps exist in community engagement in public health messages, and support from the local government is nearly absent.

The chapter is positioned within a conceptual framework that links the three tripods of sustainability to theoretical concepts and intervention programmes. It shows how interventions such as the provision of sanitation facilities, access to health care, and rapid response squads can ameliorate spatial injustice and also how the adoption of participatory governance approaches can be achieved through the communication of health messages and the agency of local government involvement. Both of these are aligned with social sustainability goals. On the other hand, community responses to state messages are considered an intervention that could address Neighbourhood effects in specific communities and then help to achieve economic and environmental sustainability goals. This provides a template for further interrogation of the linkages between social, economic and environmental sustainability in the management of infectious diseases in low-income communities.

Concern with the welfare of disenfranchised residents and those made vulnerable by being residents in specific parts of the city is a core part of this book. Chapters have therefore inadvertently drawn attention to the importance of social sustainability as a goal in infectious disease management. This is found in the use of social justice, spatial justice, Marxist theories and even the Pharmaceutical Model as the basis for theoretical discussion. The linkage between health, well-being, adequate housing, and the city economy is also implied. These have to be incorporated into response systems for infectious disease management.

The squalid living conditions that aided the transmission of Lassa Fever in Jos had justified draconian measures of compulsory isolation during the Spanish flu, while also prompting great apprehension for COVID-19 containment. Chapters, therefore, established the need for preemptive actions to stem the tide of infectious disease through home improvement and, where necessary, the rebuilding of inadequate housing. However, the dire consequences of not adopting participatory processes and failing to effectively communicate these processes to residents were depicted by Maik Nwosu with reference to Maroko. The possibility of history repeating itself in this way is evidenced by the findings in Chapter six on the lack of local government responses and the resulting state-citizen distrust visible at the time of the COVID-19 pandemic.

The role of transportation networks in spreading infectious diseases can be discerned from historical investigations. The ship *'Bida'*, sailing from Fernando Po to Ghana and then Lagos, was identified as the chief means through which the Spanish flu was introduced in Nigeria, and air transportation was the principal agency for international transfers of the COVID-19 disease. In the account of the containment of Lassa Fever when it was first diagnosed in Nigeria, Grant Fuller records that the second-wave index case of Lassa Fever was traced from Jos, Northern Nigeria to Lagos, Southwest Nigeria, probably having undertaken the journey by road and exposing other travellers to Lassa Fever infection.

The primacy of Lagos as the commercial and economic nerve centre of colonial and modern-day Nigeria makes it inevitable that it becomes the epicentre of infectious disease outbreaks. Its high urban density and the anonymity of its city life also made it easy for people from other parts of the country to escape to it not only in times of disease outbreaks but also to access better health care facilities in Lagos. This is a signal then that closer attention be paid to the transportation of infectious diseases, the cities they are likely to enter through and how, and concerted, preventive actions prepared to anticipate the occurrence and contain the spread. In addition, it also makes Lagos a peculiar learning field for other African cities with similar positions.

Conclusion

The COVID-19 pandemic is far from over. The housing conditions of low-income people across Africa cannot be said to have changed in any discernible way in the much-anticipated 'post-COVID-19' world. Several millions of people across Africa who reside in these communities are still vulnerable to infectious diseases.

Our study has attempted to direct attention to how people have coped in the past with these circumstances, how the government has reacted to these situations and has offered directions on the way forward. We have learned from history, from fictional and non-fictional accounts, and have also carried out housing studies through surveys and focus group discussions. Through our own research, we have utilised multiple points of entry to contact the target audience and have promoted sustained attention to our findings through strategies from the creative arts. We have found the agency of the local community to be very critical in coping with the spread of infectious diseases. We have also found that state-led public health messaging must be sustained but is communicated more effectively when done in cooperation with trusted local networks at the community level. The instrumentality of transportation infrastructure was also found to be a considerable carrier of infectious diseases. In tandem, the inadequacy of health infrastructure at the community level creates a very clear gap. For decades, opportunities for improving housing conditions through inclusive regeneration approaches have been ignored or met with limited success. Often, further problems are created when these projects are carried out for investment purposes rather than social considerations.

The implications of these for African cities lie in the ability of governments to listen more to the people, reach them more effectively, and create strategies for resilient social and physical infrastructures to be better prepared for future health emergencies. In all, these chapters present a unified voice, although expressed in different genres of literature, different disciplinary stances, and differing approaches to evidence, regarding the need for sustained comprehensive and participatory approaches for solving urban problems.

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Chapter 2

COMBATING EPIDEMICS IN LAGOS: LESSONS FROM HISTORY

Felix Ajiola

Abstract
Given that history plays a crucial role in explaining the existential realities of people in society, this chapter undertakes a historical investigation of the occurrence, spread, and management of two disease outbreaks in Lagos, Nigeria: the Spanish Influenza and HIV/AIDS in the colonial and post-colonial epochs, respectively. Using historical methodology, the essay highlights a number of strategies adopted in combating these major outbreaks. It relies on primarily archival materials obtained from the National Archives in Ibadan, Nigeria; the Public Records Office, London, United Kingdom; the Lagos State Records and Archival Bureau (LASRAB); as well as the Records Unit of the Lagos State Ministry of Health. The archival data were subjected to rigorous historical analysis and interpretation. Findings show that while the Spanish Influenza and HIV/AIDS were decisively brought under control, the strategies adopted by the state government affected the patterns of social interactions among people owing to the nature and extent of the policies and regulations. Despite the severity of these deadly diseases in Lagos, they were easily curtailed through immense collaborations between the state government and Lagosians, who cooperated with the government. It is therefore concluded that a strong connection exists between the present and the past in the management of epidemics in Lagos. It is, therefore, important that lessons from history be integrated into contemporary strategies for combating existential health challenges in Lagos.

Keywords: Epidemics and control, HIV/AIDS Multi-tenanted housing, Public Health, Spanish Influenza.

Introduction

Since colonial times, Lagos has witnessed two pandemics and several epidemics. Two of such devastating epidemics have been the Spanish Influenza, which broke out in Lagos between 1918 and 1920, and HIV/AIDS, which emerged around the last two decades of the twentieth century. The position of Lagos as a major social, economic and cosmopolitan centre has historically made the city an epicentre of epidemics in Nigeria and West Africa. The outbreak of the Spanish Flu and HIV had devastating effects on social relations and security as well as on the health and well-being of Lagosians in colonial and postcolonial times. Relying on a careful interpretation of colonial and postcolonial archival data, therefore, the chapter analyses points of convergence and divergence in the control of past and present epidemics in the state. The chapter thus seeks to explain how the colonial state and postcolonial regimes managed the outbreaks of pandemics and epidemics, with a view to highlighting lessons that may guide further policy actions on the novel coronavirus (COVID-19). Given that much of the literature appears to be silent on the strategies adopted against the outbreak and escalation of various communicable diseases in the past, this chapter makes an important contribution to studies on such socio-medical phenomena, which tend to have serious implications for economic life. The chapter also identifies and assesses the roles of government and non-governmental interventions and partnerships in combating the spread of communicable diseases. Structurally, the chapter is divided into five parts as follows: introduction, literature review and conceptual framework, data presentation and analysis, discussion and policy recommendations and conclusion.

Literature Review and Conceptual Framework

The term ‘epidemic’ is used to describe the rapid spread of disease among a large number of people in a given population within a short period of time. Epidemics of infectious disease are generally caused by several factors, including a change in the ecology of the host population (e.g., increased stress or an increase in the density of a vector species), a genetic change in the pathogen reservoir, or the introduction of an emerging pathogen to a host population (by movement of the pathogen or host) (Marcovitch 2009). Generally, an epidemic occurs when the host’s immunity to either an established pathogen or a budding pathogen is suddenly reduced below that found in the endemic equilibrium and the transmission threshold is exceeded. Brown (2018*)* noted that “an epidemic may be restricted to one location; however, if it spreads to other countries or continents and affects a substantial number of people, it may be termed a pandemic.”

A quite expansive and interesting body of work exists on the outbreak and control of epidemics in Nigeria. However, not many of these works offer instruction through historical investigation in dealing with global and contemporary resurgences of epidemics such as COVID-19 and Lassa fever in Lagos, Nigeria. Among scholars who have written on the spread and control of epidemics in Nigeria are Sarah Monson, A.S. Balogun, Olusegun Jimoh, Jay Walker, William Nwachukwu, Adeyemi Olusola, Babatunde Olusola, Olumide Onafeso, Ajiola, Felix**,** and Samuel Adelabu. Using virtual ethnographic methods with a Foucauldian approach, Monson (2017) investigates the ways in which the U.S. media created discourses of panic and otherisation, leading to discrimination and stigmatisation during the outbreak of the Ebola Virus Disease (EVD). Monson argues that the electronic media created fear and panic in the form of medical terrorism, leading to the othering of Africans. Such otherisation, she insists, had traumatising consequences. However, her work fails to discuss strategies adopted in managing EVD in Africa.

In tracing the origins of the Ebola virus disease, Barrios (2014) claims that Ebola originated in the Democratic Republic of the Congo in 1976. The disease later manifested in the West African countries of Liberia, Sierra Leone, Guinea, and Nigeria between 2014 and 2015. Barrios claims that about 2,600 lives were lost to the EVD out of a total of around 5,300 infected cases identified in West Africa during the period. The outbreak of EVD created intense panic, leading to travel and trade restrictions, a decline in tourism, and threats by multinational companies to halt operations in the affected countries (Manson 2017). Barrios analyses how the UN Security Council declared the Ebola outbreak a threat to international peace and security even as it disclosed plans to curtail the pandemic. Barrios (2014) also notes that modern-day mobility is a widely recognised conduit for the rapid spread of the disease (Manson 2017). Even as he demonstrates how EBV spreads, i.e., mainly through direct contact with bodily fluid from an infected person. According to Barrios, the core strategies deployed against the spread of EVD, include the partial suspension of social and economic activities in the affected areas, quarantining, and massive testing of suspected persons.

The role played by the United States Centers for Disease Control and Prevention was significant in flattening the EVD curve in West Africa. Barrios reports that the U.S. Centres for Disease Control and Prevention gathered information that effectively helped combat the disease. Other African institutions, e.g., the Economic Community of West African States (ECOWAS) and the African Union (AU), also demonstrated commitment to curbing the disease. Barrios (2014) asserts that the international community's

response to EVD was tailored towards "containment", as diplomats were placed under urgent evacuation, business trips were cancelled, and international events were postponed. Barrios further notes that EVD was mitigated through careful surveillance, case investigation, laboratory confirmation, contact tracing, safe transportation of persons with suspected Ebola, isolation, infection control within the healthcare system, community engagement, and safe burials.

Olusegun Jimoh, in *Managing Epidemic: The British Approach to 1918-1919 Influenza in Lagos*, examines how the British managed the 1918 outbreak of the influenza pandemic in colonial Lagos. Relying heavily on government records from the Public Record Office, London, Jimoh notes that the epidemic provided colonial authorities with political opportunities to consolidate colonial capitalism and racial segregation as well as to present colonial medicine as an act of benevolence. Jimoh reports that the first human case of influenza in Lagos was confirmed on September 14, 1918. In managing the epidemic, Jimoh observes, the response of the colonial authorities was laced with racial sentiments (Oluwasegun 2017). Jimoh's critique ends with the conclusion that the colonial approach to the Spanish Influenza in Lagos was clandestine, racist, and ineffective.

A.S. Balogun's study, *HIV/AIDS Epidemic in the History of Nigeria,* critically examines the historical development of the HIV/AIDS epidemic in Nigeria between 1986 and 2007. The author notes that the HIV/AIDS phenomenon, which began as a minor health challenge in Nigeria in 1986, later escalated to the status of a major epidemic in the 1990s owing to the poor disposition of Nigerians to the disease and the absence of proactive measures on the government's part. Balogun demonstrates, inter alia, that the FCT and Enugu recorded the first two cases of HIV/AIDS in Nigeria: a 13-year-old sexually active girl and a female commercial sex worker from a neighbouring West African country. Balogun further shows that the HIV/AIDS incidence has been high among the youth and women in Nigeria. He also reports the absence of antiretroviral therapy in the country until 2001, when President Olusegun Obasanjo's administration launched Nigeria's first-ever antiretroviral programme. Balogun, therefore, submits that a large number of people living with the disease in Nigeria could not access treatment owing to the high poverty rate (Balogun 2010).

On their part, William, Nwachukwu, Yusuf, and Nwangwu focused on the government's response to the re-emergence of yellow fever in Nigeria in 2017 (Olusola, Onafeso, Ajiola, Adelabu, 2020). Explaining that the disease is transmitted through physical contact with infected Aedes mosquitoes, the

authors list high fever, jaundice, abdominal pain, vomiting, and bleeding from different bodily orifices as major symptoms of the disease. According to them, yellow fever accounts for about 170,000 severe cases with over 60,000 annual deaths globally, with Africa accounting for ninety per cent of the casualties. They further note that the major coping strategies include effective yellow fever surveillance, adequate laboratory services, high-coverage routine yellow fever immunisation, vaccination exercises, adequate communication, and effective vector management.

More recently, Adeyemi, Babatunde, Onafeso, Ajiola, et al. investigated the early stages of COVID-19 incidence in Nigeria (Olusola, Onafeso, Ajiola, Adelabu, 2020). They noted that the early deaths recorded had been due to the negligence of the Nigerian health sector and its consequential effects on medical facilities in the country (Olusola, Onafeso, Ajiola, Adelabu, 2020). The authors also noted that many Nigerians, including some members of the ruling elite, had managed to cope with the deplorable health amenities in Nigeria during the general lockdown of 2020. However, they added, subsequent efforts of the Nigerian government on COVID-19 control changed dramatically with the imposition of lockdowns that prevented international travel owing to border and airport closures.

Walker (2016) examines the impact of technology and human behaviour in controlling the epidemic in Nigeria, showing how modern communication technologies have helped in managing pandemics, including panic and depression. He observes that Twitter, Facebook, Skype, and YouTube, among others, had an adverse impact on the psyche and mental well-being of people owing to the uncensored dissemination and mismanagement of information on the pandemic, (Faleye 2017) despite the important role that technology plays in the control of pandemics and other health-related emergencies.

While these studies contribute to helping us understand the multilayered responses adopted against the outbreak and spread of various deadly diseases, there is a paucity of studies focused on the lessons to be drawn from the handling of past epidemics and how they might be applied in checking the spread of novel coronavirus diseases. This study fills an important gap in the historiography of epidemiology, public health safety, and housing development in Lagos. Historical studies have neglected the role played by governments and local communities in controlling epidemics in Lagos. Clearly, little is known about the role of government, residents, and civil society in the managing escalation of diseases in Lagos, especially within specific historical contexts. As such, as already noted, the present study focuses

on the Spanish Influenza of 1918-1920 and the HIV/AIDS incidence that was rampant during the last two decades of the twentieth century.

Archival Analysis of Spanish Influenza and HIV/AIDs Epidemic Control in Lagos

The Spanish Influenza

European incursions and activities brought along urbanisation, demographic changes, and new consumption patterns in different parts of Africa, including Lagos, Nigeria. Among other things, the European presence precipitated diverse forms of epidemics that transcended the entire colonial period in the region. Lagos, a cosmopolitan city in West Africa, was affected by the outbreak of various epidemics of catastrophic proportions. This was also due to unbridled migration, population growth, and poor environmental conditions. It is important to note that prior to the twentieth century, Lagos, popularly called 'Eko,' was a kaleidoscope of cultural expressions and innovations, a melting pot of heterogeneous cultures where diverse ethnic groups from West Africa and Nigeria had settled. Lagos had been a haven for many people from the Nigerian hinterland since the 16th century, with the momentum only increasing in the 19th century owing to the incessant warfare in the hinterlands (Faleye 2017). The establishment of Lagos as the seat of government, following the amalgamation of Nigeria, also created employment for Africans seeking work while acting as a stimulus to the local economy by drawing in workers from the countryside (NAI, 1919). These factors made the city and its people vulnerable to diseases induced by environmental factors. For instance, poor sewage management, amidst increased international commerce and travel to Lagos, worsened the already unsanitary conditions, thus paving the way for the outbreak of infectious diseases.

One of the catastrophic epidemics that occurred in Lagos was the Spanish Influenza, which was first recorded in Lagos in October 1918. The influenza outbreak was severe, claiming lives, tearing families apart, and ruining many businesses. Indeed, the flu epidemic affected not only Europe, which was the epicentre of the epidemic but also all the other continents, (NAI, 1919) including Africa, where casualty figures were quite high. For instance, it was estimated that thousands of people died in Lagos, Nigeria. It was reported that virtually every family in Lagos and its hinterlands had to bury someone between October 1918 and January 1919 (NAI, 1921). Commercial establishments and other institutions, such as native courts, schools, churches, markets, and other social spaces, were forced to shut down. The world, its

people, and all worthwhile economic activities temporarily came to an abrupt halt owing to the threat posed by the epidemic (PRO 1919).

The effects of the epidemic were sweeping and rapid. In his description of the rapid nature of the epidemic and the severity of its symptoms, a colonial medical practitioner, Ladipo Sapara, reported that the virus was highly contagious and damaged the internal organs of infected persons in less than two days. According to M.O. Jimoh, "some of the symptoms of influenza included, bloody sputum, nose bleeding, and failure of the lung associated with haemorrhagic and oedematous complications" (Jimoh 2017). The first official case of influenza in Lagos was recorded on September 14, 1918, and, according to reports documented in 1919 in the Blue Book of the Colony and Protectorate of Nigeria, "on noticing the first case, the colonial government co-opted private medical doctors to campaign on the safety procedures to be observed" (NAI, 1921).

On September 14, 1918, the colonial government's health department found that some sailors and other staff on the S.S. Panayiotis were critically sick and lying on the ground at the Iddo Wharf, Lagos (Jimoh 2017). News of this discovery had inspired fear, anxiety, and suspicion in Lagosians, especially those living around the area (PRO 1919). At this time, every kind of illness in Lagos was suspected to be influenza-related. As part of precautionary measures, several sick residents of the colony, as well as those transiting through the area, were taken to an isolation centre on the Island, where they were tested and quarantined. To ameliorate the crisis, many ships where passengers and crewmen had tested positive were impounded, while other ships without cases of illness were thoroughly sanitised and further isolated in a remote area of the port (Jimoh 2017).

Furthermore, other steps were taken to prevent the spread of influenza. By mid-September of the outbreak of the disease, it was discovered that some commercial ships stationed in Lagos had been infected, as an infected ship had clandestinely docked in Lagos, thereby escalating the epidemic in the state (NAI 1921). The ship named Bida was specifically identified as "the chief means through which the disease was introduced into Nigeria" (PRO 1919). The ship had sailed from Fernando Po and passed through Ghana before docking in Lagos on September 14, 1918, with about three hundred people onboard (NAI 1919). The captain had erred in allowing passengers to disembark without observing the necessary health procedures. Subsequently, mixing with the local population, the infected people from the ship ultimately caused a sharp spike in the level of infection in the Lagos hinterlands.

However, sanitary officials managed to make up for some of the lapses by tracking and isolating those within and around the port, although they could not monitor persons infected outside the metropolis. Realising the impossibility of preventing the escalation of influenza, the health authorities declared on September 25 that every section of Lagos had become unsafe and infected (NAI, 1919). As part of measures to control the disease, an observation hospital was opened in Ikoyi on September 26, 1918. Strategically located in the northeastern part of Lagos, the hospital was the quarantine venue for those suspected of having been infected. The hospital was also saddled with the responsibility of catering for those living in congested residential areas. These efforts were part of the initial reactions of the colonial authorities in curtailing the spread of influenza in slums and areas with multi-tenanted, low-income housing in Lagos (NAI, 1919).

Nevertheless, within a month of the influenza's emergence in Lagos, hundreds of deaths had been recorded in the state. The fear caused by the outbreak of the disease forced many people to flee to the hinterlands (Ohadike, 1991) and the government's attempts to halt the massive emigration from Lagos failed owing to a shortage of constables, hence the failure of colonial officials to curb the escalation of the influenza. In fact, most of those who fled Lagos ended up dying of the disease (NAI, 1918).

By January 1919, the death toll had crossed the two thousand marks as the number of fatalities had risen sharply between November and December 1918. In October, more than a thousand people died, compared to a little above six hundred in September 1918. The figures decreased in November, and from December through the whole of 1919, casualty figures further declined owing to effective measures adopted by the government and the communities. In all, about 2,800 people died of the disease, based on the official reports of the colonial authority (NAI, 1919). It appears, however, that the figures given by the colonial government were grossly inaccurate, as they failed to include the cases of those who died at home and were not reported to sanitary officers. Moreover, the figures released by the colonial authorities did not include unreported cases of minors who had died of the disease. Although these deaths were considered a disaster among the core Yoruba people in Lagos, they made the casualty figures more legitimate and acceptable. In line with Yoruba rites, the corpses were taken to the forest in the wee hours for burial. Many people concealed the fact that they had contracted the disease, even as many cases of death from the disease were also concealed by family members (NAI, 1920).

HIV Epidemic

The first Nigerian cases of HIV/AIDS were identified in 1985 and reported at an international conference in 1986. Lagos, the then Federal Capital of Nigeria, and Enugu, the then Capital City of Anambra State, accounted for those cases. According to the then Minister of Health, the first two cases were a 13-year-old sexually active girl and a female commercial sex worker from a neighbouring West African country. This suggests that youths and women have been at the centre of the HIV/AIDS phenomenon in Nigeria. However, as the disease began to spread in the country in the 1990s, the northern region, particularly in the north central zone of the country, began to record a greater incidence of HIV/AIDS. However, there have been variations in the prevalence of HIV/AIDS in Nigeria since the 1990s, when the government started to conduct the National HIV Sentinel Survey. Since 1986, the disease has continued to spread in Nigeria, and by 2005, Nigeria was ranked third in the global ranking of countries being ravaged by HIV/AIDS (Gerald, 2010). Sources of transmission included sex (heterosexual, homosexual, anal and oral), mother-to-child, blood transfusions/blood products, and the use of contaminated sharp objects.

Other sources of transmission include medical procedures such as injection administration, surgical operations, obstetric and dental procedures, circumcision, dressing of wounds, vaginal/rectal examinations; cultural practices such as tattooing, tribal marking, blood oaths, female genital mutilation, blood rituals, circumcision; incidental events such as thorn pricks, needle-stick injuries, blade cuts, clipper cuts and bites; and diseases such as skin ulcers, genital ulcers, eczema, anal tear, peptic ulcers, bruising, cracked/sore nipple, mouth ulcers and a host of others. Intravenous Drug Use (IDU) was also another mode through which HIV has been transmitted in Nigeria over the years (Seye, 1991). HIV/AIDS victims experience severe illnesses such as persistent weight loss, high fever, and chronic diarrhoea, as well as minor illnesses such as persistent cough, skin irritation, swelling of the lymph glands and mouth infections. Many HIV victims ultimately become severely emaciated before dying. In Lagos, HIV/AIDS affects people of prime working age, especially youths between 20 and 40 years old (Seye, 1991).

In the early years of HIV/AIDS, which is caused by the Human Immune Deficiency Virus, it was assumed that AIDS was simply a disease of the homosexual community. However, it soon became obvious that the virus was able to infect heterosexuals. By the first week of February 1991, a total of 323, 379 AIDS cases had been reported to the World Health Organization (WHO) from 15 countries around the world, with 83,010 of these cases being from

Africa. In reality, these figures did not represent the total number of AIDS cases worldwide, as there were issues with under-recognition, underreporting and delays in reporting cases. WHO estimates that the true number of AIDS cases thought to have occurred since the first case is between 800,000 and one million, with about 600,000 of these being African cases (Seye, 1991).

Lagos had a greater share of infections in Nigeria owing to the high prevalence of prostitution and the sex trade in the city (NAI, 1919). Over the years, the high cost of living in the country had compelled several indigents and poor young girls to compromise and take to prostitution as a means of survival. The prevalence of prostitution in Lagos was also due to the presence of a few cartels that specialise in recruiting young women in Lagos and exporting them to Italy. In 2005, it was discovered that these girls, mostly aged between 18 and 30, were often sponsored to Italy by cartels and sex merchants under the disguise of securing employment for them abroad. Each girl would then be coerced into signing an agreement requiring her to pay 15 million Italian lira within a specified period after securing 'employment'. According to a government report, on arrival in Italy, the girls would be housed in expensive quarters, provided by hoteliers collaborating with barons and sex merchants in Italy. It was noted that a number of these girls were deported to Nigeria after they contracted HIV in Italy. Subsequently, they would reintegrate into Nigerian society, especially Lagos, and thus continue to spread the disease. Many of the deportees also returned to prostitution in Lagos and spread HIV through unprotected sex (NAI, 1920).

Policy Recommendations

Responses to the Spanish Flu and HIV/AIDS

Owing to the highly contagious nature of the Spanish Flu pandemic, community preventive regulations were suggested by the Oba of Lagos, Eleko Eshugbayi. There were public announcements to the effect that those returning from burying their relatives were to take off their clothes and burn them before going into their homes. It appears, however, that these efforts were not effective enough, as many people ended up contracting the influenza and dying only a few days after burying their dead. Consequently, there was agony and panic all over Lagos, not really because of those who had died but more because of the likelihood of being the next to die after contracting the disease at the burial of a loved one.

Given this frightening situation, by December 1918, people had begun to make the culturally painful choice of abandoning their dead on the streets as a way to curtail the epidemic. Many people also took ill from the psychological

torture of not being able to give their dead the final rites of passage. Another measure for curbing the spread of the virus was discouraging people from visiting the homes of the recently deceased. With farms and markets staying shut, people preferred starving to being infected with the disease. However, many Lagosians improvised by cultivating vegetables like yam and cassava in their yards.

On the curative side, the rapid spread of the influenza led to experiments with traditional medicine. In December 1918, the Oba of Lagos, Eleko Eshugbayi, summoned some traditional doctors and healers to brainstorm and prescribe medicines and cures. Within a few days, the traditional doctors recommended the following herbs:

1. Ewe rere
2. Ewe Asofeyeje
3. Efirin ajase
4. Egbo Oruwo
5. Lemon grass (NAI, 1920)

The Oba then deployed his messengers and town criers to every street in the Colony, and they proclaimed as follows:

> "Kere O! Kere O!" The Oba has consulted the traditional medical experts and advised that everyone should take a portion of ewe rere, ewe asofeyeje, efirin Ajase, egbo eruwo, and ewe tea (lemon grass)." (NAI, 1920)

No doubt, the outbreak of the disease severely tested the capacity of the colonial government and led to the establishment of a number of medical schools. These schools were set up primarily to conduct research on vaccines and other preventive measures as well as a cure for the disease. To effectively support these initiatives, the government embarked on the structural and physical reorganisation of towns and villages, in addition to land reclamation and the draining of swamps. (Jimoh 2017) The government also introduced sanitary measures as a way to clean up the environment and make it more habitable.

The report submitted by the colonial government outlined three categories of measures (NAI, 1919). The first was that "when vessels were infected and the shore was free, measures were directed to the prevention of importing the disease" (Jimoh 2017). The second measure was that "when ships were infected, different measures were adopted to prevent the spread of the disease

from Lagos to other ports and places of social activities." The third was that "when the disease became widespread in Nigeria and ships were either clean or heavily or moderately infected, actions were taken to prevent infection of clean ships (British Archives, 1919). This was done to prevent the spread of infection from heavily infected ships. It was also done to exclude possible viruses that could be more virulent (British Archives, 1919). However, there was no known action taken regarding moderately infected ships at the shore (NAI 1920).

These adaptation strategies were accepted by the government, and preventive tips were then written in Yoruba and English and disseminated in every Lagos community. Strategic initiatives were also adopted to stop the progression of the pandemic and reduce tension among the populace and in neighbouring towns and communities. The disease was so overwhelming that it could not be contained by the medical personnel of the colonial government alone (PRO 1919). As such, religious organisations were urged by the government to admonish their congregations on the need to obey sanitary regulations and to cooperate fully with government health personnel (Jimoh 2017). The colonial authorities also saw the need to take care of those who had been infected on ships, so they made arrangements for quarantine stations. Logistical support and food items were provided for crewmen isolated in offshore locations. The marine department also made sure that infected people were catered for in makeshift tents constructed around the port as quarantine stations owing to congestion at the General Epidemiological Centre in Ikoyi, Lagos (PRO, 1919).

As part of measures to prevent the spread of the disease, public and private spaces and facilities, including railway stations, vehicles, ships and streets were sanitised with "Sulphur and Cylin disinfectant. (NAI, 1919; 1921)" This was done by the government's medical personnel on September 18, 1918. House-to-house checkups were also quietly conducted by the government's health officials. These strategies had unprecedented effects, as many people who had been hiding their infected status were discovered (NAI, 1920). To effectively contain the disease, public institutions and religious houses—schools, churches, mosques, and other public outlets—were closed. The government also prohibited any public gathering of any kind (Jimoh 2017).

As part of further measures to contain the deadly virus, the British Government imposed the Health Ordinance of 1918 (PRO 1919). Through public notice, the virus was announced as highly contagious. The legal recognition of the

disease as infectious gave the colonial government the power to forcefully intrude into people's homes—an action that had been unprecedented in the history of Lagos (NAI, 1919). The forceful intrusion nevertheless helped, although it created a climate of fear among Lagosians, leading to a wave of discrete escapes by infected people to the hinterlands and thus increasing the spread of the disease (NAI, 1921). Even more, the influenza gave the colonial government more legal control over its subjects, both socially and medically (Jimoh 2017). For the first time, the government had the power to place people under medical regulations with or against their consent. To ensure that this was communicated widely enough, the British Government commissioned the police and other relevant apparatuses of the colonial state to assist with the quotidian inspection and medical operations (Jimoh 2017). Because the visits created fear in the populace, the government engaged local agents to persuade community members of the need to cooperate with the government in combating the disease (NAI 1921). When the disease reached its peak, the government built an observation hospital to monitor the situation. At this hospital, those who tested positive for the virus were forcefully quarantined in line with the Health Ordinance of 1918 (PR0, 1919).

In the case of HIV, since poverty and unemployment were counted among the core factors propelling young girls into prostitution, the government and some NGOs intervened and empowered young people living with HIV/AIDS economically. The Lagos State Government devised policy measures, including partnering with health and media practitioners in the use of multimedia platforms for informing and communicating with the people on the HIV/AIDS/STIs menace. Programmes were also regularly held to educate people on the dangers of the disease. In addition, collaborative seminars were organised for infected groups alongside other community-based enlightenment programmes on HIV/AIDS/STIs.

The introduction of the Family Life Education Curriculum (FLE) into primary and secondary education, as well as the introduction of a mandatory HIV/AIDS course for post-secondary school students, was part of the efforts to increase knowledge and reduce high-risk behaviour among Lagosians and other Nigerians. The Lagos State Aids Control Agency and other partners (both local and international) engaged in a number of care and support activities to mitigate the impact of HIV/AIDS among the populace. These included the setting up of Voluntary Counselling and Testing Centres by the state and federal governments, as well as the provision of psychosocial, nutritional, economic, and educational support for the orphans of deceased victims of

HIV/AIDS and other vulnerable children, as well as the extension of psychological support to people living with HIV/AIDS.

Non-governmental organisations (NGOs) also established VCT centres, which were funded by foreign institutions, notably the U.S. Centers for Disease Control and the French Foundation de France. The NGOs mostly provided food items to members of their support groups. The state government, through the Lagos State Aids Control Agency (LSACA), encouraged and promoted home-based care as a means of providing affordable and quality care for infected people in the confines of their homes. This was especially cost-effective because HIV victims felt more at home among supportive relatives and friends.

One major constraint on the care, support, and treatment of people living with HIV/AIDS in Lagos, for example, was the population density and cosmopolitan nature of the state as the commercial nerve centre of the country and its large population, which translated to a high number of people living with HIV/AIDS. Despite the remarkable efforts of the state and federal governments' antiretroviral programmes, there were inadequacies in terms of the capacity to care for all people living with HIV/AIDS. Another major constraint on the provision of care and support in the state was the limited number of NGOs working on care and support. The limited involvement of private health practitioners in the provision of care and support services to people living with HIV/AIDS also constituted a constraint on effective care and support programmes in the state. Moreover, economic hardship, especially as faced by low-income earners, made it difficult for many poor families to cope with the demands of caring for their relatives afflicted by HIV/AIDS.

Residents of slum communities in Lagos, especially the uneducated, were generally informed in local languages about the causes and dangers of HIV/AIDS. Community programmes were organised to inform them about the ease of transmitting the disease through sexual intercourse, blood transfusion, and the sharing of sharp objects such as needles used by infected persons. Residents of such housing were sensitised on the need not to stigmatise victims by avoiding contact with them, although they were encouraged not to share sharp objects such as needles, blades, and knives with them or have unprotected sex with them.

As many of the HIV patients had regular access to drugs, they were able to manage the disease; those who later progressed to AIDS had lived for many years with HIV. The most common illnesses experienced by HIV patients were fever, cough, diarrhoea, weight loss, loss of appetite and catarrh, with many of

such patients continuing to have unprotected sexual relations with members of the opposite sex in the community. Generally, HIV/AIDS patients living in multi-tenanted housing coped better in such housing than people afflicted by other epidemics. Since the disease was not airborne or easily transmitted by mere social contact, people took precautions and observed safety measures by avoiding unprotected sex or sharing metal objects with others. In some of such multi-tenanted housing residents engaged in regular sanitation of shared facilities such as toilets and bathrooms.

Conclusion

History plays an indispensable role in the existential realities of people and society, as historians frequently engage the history of contemporary social formations as a way of throwing new light on the past and explaining the present. This chapter has, therefore, analysed the nature of the British colonial government's response and the postcolonial state's strategies in combating Spanish Influenza and HIV/AIDS, respectively. The chapter showed that in Lagos, epidemics were largely controlled through the concerted efforts of the government and non-government stakeholders, including traditional rulers and ordinary residents. It is, therefore, not out of place to suggest that some of the historical measures undertaken—e.g., contact tracing, isolation, and quarantining of infected persons; the launch of public awareness and sensitisation programmes, use of traditional medicine; and the imposition of public health and safety laws—could be used in controlling the spread of the novel coronavirus disease in Lagos. The chapter also showed that public engagement is an integral component of strategies adopted in combating epidemics in the colonial and postcolonial periods. For instance, as demonstrated in the chapter, during the 1918-1919 Spanish Influenza, local "town criers" played a significant role in public health messaging to eliminate the epidemic. Many town criers were employed to inform and enlighten people about the incidences of the diseases in their localities and the relevant coping measures. This method has been adopted in efforts to contain the outbreak of other epidemics in the postcolonial era. For instance, during the 1980s and 1990s, several community-based programmes were organised to educate residents of slum communities on the means of transmission of HIV, notably sexual intercourse, blood transfusion, and sharing of sharp objects with infected persons. The chapter also highlighted efforts in the past to use traditional herbs in combating epidemics, especially during the Spanish Flu in the colonial era. Lagosians concocted herbs such as *ewe tea* (lemon grass), lime, lemon, pineapple peel, *efirin ajase*, ginger, and garlic to boost their immunity and metabolism against the influenza—concoctions that are now commonly used by residents of slum communities in Lagos and other parts of Nigeria. Given the synergy between the government and the governed in

taming the influenza epidemic and HIV disease during the colonial and post-colonial epochs, it is imperative that the contemporary political administration in Lagos foster deeper collaboration with the civil society in curbing the spread of infectious diseases in the future.

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Chapter 3

ARTIBIOTICS: EXAMINING THE ROLES OF TWO ART FORMS IN SUPPORTING COVID-19 PUBLIC HEALTH MEASURES IN LAGOS

Florence Nweke

Abstract
Despite the initial uproar in conventional and social media that the COVID-19 pandemic elicited, attention was not paid to various coping mechanisms available for restoring sanity and calmness to those who had been psycho-emotionally affected directly or indirectly by the COVID-19 lockdowns. Given their information-dissemination capacity, music and animated cartoons played a crucial role in propagating the message of prevention of the virus. Information on how music helped in creating awareness during the previous outbreak such as the Ebola virus, was elicited from the literatures disease. The study adopted the methods of discourse analysis and focus group discussions. As found in this study, music helped residents to be wary of the virus through the messages in the jingles. This study found that the various measures meant to help reduce the spread of the COVID-19 pandemic were sung in the jingles. The songs also raised the hopes of respondents by shifting their attention from disturbing news about the pandemic to music and visual images. The study recommends that the arts (music, cartoons) be introduced to all strata of society as a major tool for disaster preparedness and prevention.

Keywords: Art forms, Animations, Cartoons, Emotions, Music.

Introduction

Making music arouses many people's emotions. As Perez et al. (2014) found, musical activity such as singing or listening to music provides multiple benefits to people of all ages. According to Cecil et al. (2003), "participation in a group musical *ensemble yields musical, academic, psychological, and social benefits."* In West Africa, communication and awareness infrastructure

initiated during the 2013-2016 Ebola outbreak have been leveraged during the COVID-19 pandemic (Leach, 2020). Nweke (2020) cites the World Health Organisation's (WHO) report on the role music played in Liberia's efforts to contain the spread of Ebola in 2014. The West African country had been worst hit by the Ebola outbreak. Through music, Charles Yegba sought to create awareness about the virus by identifying symptoms of the disease such as headaches, diarrhoea, and vomiting. Yegba also identified measures taken to contain the disease. The song, as well as its message, gained popularity in Liberia. Similarly, at New York University, music was used as an instrument in Public Health Education by Professor Carlos Chirinos-Espin, who developed the Africa Stop Ebola awareness campaign song (Nweke, 2020). In current times, some residents have turned to social media platforms for updates on COVID-19, with many getting useful information there on how to take precautions against its spread.

This chapter focuses on the audio and visual arts, with particular reference to music and cartoon animations, in creating awareness among the general public, particularly those living in slums and informal communities. This chapter aims to examine the role of music and cartoon animation in coping with the COVID-19 pandemic in various communities. The objective is to examine the role of music and arts in helping residents cope with the lockdown. Consequently, the chapter answers the question: 'What role did music and graphic arts play in enabling residents to cope with the lockdown?'

The chapter presents instances and illustrations of how the arts helped residents in these areas cope during the COVID-19 pandemic. In this regard, the researchers coined the word 'artibiotics'. In our opinion, many people treated the pandemic with levity at the outset, leading to many avoidable deaths. The use of jingles and animated cartoons aired on radio and television also spread on social media, serving as a constant reminder to support the campaign against the spread of disease by adhering to public health messages.

Literature Review

Presenting specific contextual evidence to people of all literacy levels is crucial (Peters, 2017). Wang (2020) asserts that all media (print and electronic), such as newspapers, magazines, television, radio, billboards, phones, and the Internet, are instrumental in the war against the COVID-19 pandemic. Wang (2020) further asserts that "these media have provided updates on the number of infections, fatalities, recoveries, emergency regulations, and policies, especially as it pertains to the COVID-19 pandemic.

Nevertheless, society is full of people who disproportionately spread negative information about growing or current issues, as reported by Baumeister et al. (2001) as well as Tierney and Baumeister (2019). According to Motta et al. (2020), to create more awareness about the urgency of the COVID-19 situation, more rigid measures were encouraged in many cities. Moreover, as Frenkel et al. (2020) reported, "individuals who informed themselves mainly through newspapers have a higher degree of knowledge than those who used television and social media." As such, people tend to get wary about current issues through multiple media outlets. In Nigeria, information about COVID-19 prevention measures was disseminated extensively via social media platforms. The present study identifies some of these outlets, focusing on 'two art forms', hence the coinage 'artibiotics'.

Kearns (2018) used the word 'artibiotics' to communicate a clear message that emotionally resonates with viewers based on the artistic forms of music, painting, stylisation, or a combination of different art forms. Miranda (2018) also adds that

> "the rules of music are indeed arbitrary' claimed several codes representing the realms of genetics and music, which are vital for information communication."

Outlets for Creating Awareness During the COVID-19 Lockdown

Sloboda further claimed that "music can and does have important psychological benefits. Not only does engagement with music seem inherently pleasurable when used for essentially therapeutic purposes but strong and valued emotions also seem to be at the core of music engagement" (Sloboda, 1992). Camics (2008) reports that an emerging set of studies has begun to explore the role of visual art, music, dance, storytelling, and theatre/drama in improving lay understandings of HIV/AIDS, malaria, cholera, mental illness, etc. As well as addressing general health and well-being, these studies engaging the use of the arts belong to a multidisciplinary field that integrates artistic skills in interventions for improving healthcare at the broadest level, from health promotion to illness management to policy development.

Ayedee et al., (2020) note that human beings are emotionally attached to electronic media and depend on them for daily information on COVID-19. Sarna and Norstrom (2021) report that the Internet and social media became outlets for people's reactions to unfolding events, especially those related to the COVID-19 lockdown. One way in which people participated was by creating and sharing memes as an expression of digital participatory culture. As

Hoffman et al. (2020) observed, during the lockdown, cartoons performed various functions ranging from purely commercial to psychological ones.

For Kearns et al. (2020), "Comics became a popular medium for exploring COVID-19-related topics, helping to rapidly bring public health terminology like 'social distancing' into common parlance and understanding." Moreover, in the field of healthcare, illustrating patient resources with pictures, including cartoons and comics, was shown to enhance patient understanding, particularly for those experiencing communication barriers related to education, literacy, health literacy, language, and culture (Austin, Matlack, Dunn, Kesler & Brown [1995]; Brotherstone, Miles, Robb, Atkin & Wardle [2006]; Delp & Jones [1996]; Houts, Doak, Doak & Loscalzo [2006]; Murphy et al. [2007]; Tjiam et al. [2013]).

Aikins (2020) posits that artists translate COVID-19 information in ways that connect emotionally, create social awareness, and lay the foundations for public understanding. Some other research findings offer sociopolitical critique and advocate social protection for poor communities. Ananta and Devi (2020) noted that "in the course of the COVID-19 lockdown, students' learning performance, especially at the elementary level, significantly increased due to watching animated and gag cartoon-based intervention." An animated cartoon, when deployed in teaching students, encourages them to learn any complicated subject matter quickly (Mtebe & Twaakyondo [2012]), in addition to catching the attention of students with Attention Deficit and Hyperactive Disorder through the motion and images portrayed (Govindaraj, 2012). Muthuchamyand Arunraj (2013) found that learning via a "cartoon has a significant positive effect on children as it creates a humorous environment where they can learn contents easily, respond to any queries, enjoy classroom situation, react to any stimuli whether it may be alone or with friends in a small or large group." To be sure, learning with animated cartoons became a new normal during the COVID-19 pandemic lockdown, as the researchers found.

Marc (2021) added a new dimension by using documents to make the virus vivid and the pandemic an experienced reality. Thus, the COVID-19 signage, which materialises the disease and pandemic into tangible items that individuals can relate to and see daily, has come to mediate social life and articulate COVID-19 during this great health crisis. Moveable images that attempt to send information about a story or a recurring issue are usually shot in rapid succession with a sequence of drawings that seem to move and change when the sequence is shown as an animated cartoon (Oyero and Oyesomi, 2014). Onuora et al. (2020) examined 470 social media users who were exposed to animated cartoons on YouTube. Onuora et al. (2020) found that

"the reality of the COVID-19 pandemic was the greatest factor in predicting the effectiveness of YouTube animated cartoons on health behaviour; this was regarded as important because of the danger the COVID-19 pandemic posed to human health." Hence, every avenue for creating awareness about preventive measures was taken seriously.

Venkateswaran (2020) asserts that "Coronavirus prevention efforts both protect the people who engage in them and promote the welfare of society," adding that "often not facts and information but emotions drive the risk perceptions," hence the fact that emotions dictate how people respond to situations around them. Boni (2016:13) noted that the main strategies to elicit emotional responses are musical language components, hence his view that musical language is the ultimate form of information provision. Yatindra (2020) explores the replacement of accurate human visuals with animated cartoons used by Indian rappers in their videos. According to Yatindra, "this COVID-19 pandemic brought in the newer concept where no crew, but an individual or a smaller team, had been the production team for cartoonization of the rap videos." Yatindra also noted that hip-hop culture became famous as an instrument of creating awareness during the COVID-19 pandemic lockdown, making music even more relevant in creating awareness.

Traditional music with musical language components such as rhythm, melody, and harmony was used in experiments. Lim and Lee (2014) reported after a music therapy session, depression scores were noted to decrease. Identical results were reported by Khil Tae-sook and Chan Suk-jin (2012) and Hsu and Lai (2004) that music brings out emotions in people, eventually leading to behavioural changes (1999). Music releases oppressed feelings and grants opportunities to express those feelings in oneself. Consequently, the various roles played by these media and art forms created an opportunity to adopt them in our study on COVID-19 adaptation strategies. The researchers created musical jingles in the local dialects and also in a common Nigerian language, i.e., Nigerian Pidgin English. This was done to ensure that the dissemination research could be made accessible to people at the grassroots.

Theoretical Framework

The pharmaceutical model by Sloboda (2006) is relevant to this chapter. This chapter perceives the arts, i.e., music and cartoon animations, as antibiotics, especially in terms of their effect on listeners. As such, music is conceived as a pharmaceutical product that is capable of stimulating perceptual, cognitive, and emotional responses in a listener. Sloboda (2006), a major proponent of the pharmaceutical model, describes music as a catalyst that influences individuals and groups of people. In most cases, the choice of music is solely

dependent on its function. In this case, the musical jingles became an elixir that helped sensitize the people on safety measures.

During the lockdowns, music and animated cartoons became a strong mechanism for coping with movement restrictions as displayed in the word cloud (see Figure 1) show. Those who obeyed government regulations reported enjoying emotional relief from prolonged exposure to music and cartoon animations viewed via the media and social media platforms. Sloboda (2006) reports that there is considerable psychological evidence to show that we remember highly emotional events uniquely, with music tending to shape the body's emotional response to music.

Method

This section reports on the findings from a number of data collections conducted between July 2020 and March 2021. Data was collected from:

(i) Radio-phone in programmes
(ii) On-line survey
(iii) Focus Group Discussion

Findings

Radio-Phone in Programmes

In compliance with the public health advisory at the time of data collection, information was collected from the public through radio call-in programmes and virtual focus group discussions. The radio stations also served to solicit information from respondents about how they are coping with the pandemic and secondarily, to broadcast the research findings, which had been packaged as jingles. Discourse analysis was used to interpret the data.

On the radio, respondents called in to a special programme put up for the project. The call-in programmes allowed interactions between presenters and callers, who made up the study population. The languages of expression were Nigeria's most widely used languages: Nigerian Pidgin English, Yoruba, Igbo, Hausa, and English.

The sampling method for selecting the radio stations was purposive. The selected stations were Bond FM 92.9, which broadcasts in the three Nigerian languages of Yoruba, Igbo, and Hausa; Radio Nigeria One 103.5 FM; and Women FM 91.7. The study engaged the same radio stations for the broadcast of the research finding disseminations jingles, in addition to Metro FM 97.7FM, Wazobia FM 95.1FM, and Nigeria Info 99.3FM.

The study categorises the research objectives into six questions, simplified into open-ended questions for ease of callers' understanding. Each question was addressed for 15 minutes, three times a week. The radio call-in programme lasted for three weeks on BOND FM and Radio Nigeria 1, and the English broadcast lasted for two weeks on Women FM.

The researchers thereafter created jingles and cartoon animations from the information elicited from the public to raise awareness about the pandemic.

Online Survey

An online survey was also carried out, which elicited responses on the role of music in coping with the demands of the lockdown. Findings were analysed using descriptive statistics.

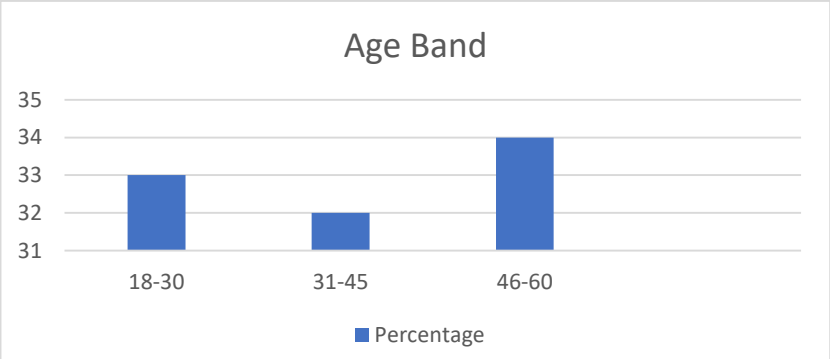

Figure 3.1: Respondents' Age band

Table 3.1: Educational level of respondents

	Frequency	Per cent
Secondary	377	13.7
Undergraduate/OND/Technical School	378	13.8
BSc/HND	403	14.7
Masters	428	15.6
PhD	401	14.6
None	391	14.2
Others	369	13.4
Total	2747	100.0

Table 3.2: First Source of Information on COVID-19

	Frequency	Per cent
TV programmes	1411	7.6
Radio programmes	1355	7.3
Jingles	1317	7.1
Music	1350	7.3
Newspaper reports	1356	7.3
Twitter	1320	7.1
Facebook	1320	7.1
Instagram	1318	7.1
LinkedIn	1275	6.9
WhatsApp	1326	7.1
Words of mouth	1344	7.2
Cartoons	1274	6.9
Animation	1279	6.9
Other Source	1321	7.1
Total	18566	100.0

Table 3.3: Our current source of information on COVID-19

	Frequency	Per cent
TV programmes	1420	7.6
Radio programmes	1341	7.1
Jingles	1333	7.1
Music	1295	6.9
Newspaper reports	1376	7.3
Twitter	1352	7.2
Facebook	1393	7.4
Instagram	1313	7.0
LinkedIn	1311	7.0
WhatsApp	1420	7.6
Word of mouth	1341	7.1
Cartoons	1264	6.7
Animation	1337	7.1
other sources	1288	6.9
Total	18784	100.0

Table 3.4: How frequently do you seek information on COVID-19?

	Frequency	Per cent
Highly frequently (i.e. every day)	746	27.2
Fairly frequently (i.e. at least once a week)	716	26.1
Less frequent (i.e. at least once a month)	672	24.5
None (i.e. I don't seek out information on COVID-19)	608	22.2
Total	2742	100.0

Respondents are mostly in the 46- to 60-year age band (Figure 3.1), with a fair spread across basic and higher educational qualifications, although with a slightly higher number of Masters degree holders (Table 3.1). This might be a result of the online method of engagement, which is deemed more accessible to people with higher educational backgrounds. The TV programme was the first medium through which respondents heard about COVID-19 and continued to be their current source of information on COVID-19 (Tables 3.2 and 3.3). At the time of the survey, respondents sought information on COVID-19 on a daily basis, and this is not surprising given the lockdown situation (Table 3.4).

Table 3.5: Has music played any role in helping you cope with the pandemic?

	Frequency	Per cent
No	672	24.5
Yes	740	27.0
I don't know	654	23.9
I don't listen to music	676	24.7
Total	2742	100.0

The question on the role of music during the lockdown got a total of 430 votes, with the 'yes' option having the highest percentage of votes at 68.1%, while 'I don't know' has 13.7% of the votes, 'No' has 12.1% of the votes, and 'I don't listen to music' has 6% of the total poll percentage. Further manual analysis of the responses of those who chose 'yes' was done, with the word cloud shown in Fig. 3.2.

Figure 3.2 Word cloud showing the role of music during the COVID-19 pandemic lockdown

The word cloud above is a pictorial presentation of respondents' perceptions of the role of music during the pandemic. The words 'music,' 'helped,' and 'mind' are most prominent, followed by the word 'whenever,' and others such as 'boredom', hope,' and 'away.' 'Nerves' and 'calm' are also visibly prominent.

Manual textual analysis showed that music is associated with these words in various contexts. Some of the respondents stated the following:

'Music has **helped** relieve the stress of being restricted to the house' (respondent 52)

'…**helped** me clear my **mind**' (respondent 16)

'Sometimes it takes my **mind** off the negative side of the COVID-19 pandemic, and I'm lost in that exciting feeling, **whenever** my favourite music is on' (respondent 65)

'Therapeutic and killing **boredom**' (respondent 73)

'Keeping **hopes** alive positively, knowing that the pandemic is not a death sentence' (respondent 46)

'The role of focusing my **mind** on things that are more eternal, knowing full well that this phase too shall pass away' (respondent 71)

'**Calming** my **nerves'** (respondent 6)

All of these accounts indicate the importance of music as a coping strategy during the pandemic.

Table 3.6: Have you seen any cartoons or animations that changed your perception of COVID-19?

	Frequency	Per cent
No	1356	49.4
Yes	1391	50.6
Total	2747	100.0

Table 3.7: If yes, where did you see it? (e.g. Facebook, etc.)

	Frequency	Per cent
Facebook	84	6.0
Twitter	251	18.1
WhatsApp	261	18.8
YouTube	4	0.3
TV programmes/advert	667	48.0
Social Media	69	5.0
Instagram	10	0.7
Google	8	0.6
Cartoon Network	36	2.6
Total	1390	100.0

Data was collected on the influence of art forms, cartoons and animation on the perception of COVID-19. More respondents had seen a cartoon that changed their perception of COVID-19, and these were predominantly aired on TV programmes and advertisements (Tables 3.6 and 3.7). This might be from government and non-government-sponsored health messages.

In general, the COVID-19 pandemic, though very devastating to the health sector, appears to have brought attention to the cultural sector. As noted by Jeannotte (2021), Kapoor, and Kaufman (2020), some individuals, firms, and countries displayed resilience and creativity in coping with pressing demands on healthcare and people's sanity. As of December 2020, the COVID-19 pandemic had resulted in 1.4 million deaths and over 58 million infections worldwide (Dong et al., 2020).

Focus Group Discussion

Finally, a two-hour, virtual focus group was used in engaging residents from six low-income communities in Lagos State. Participants explained how members of their communities—mainly low-income earners—had been coping with the pandemic. They also highlighted safe-keeping actions

undertaken by residents of their communities and those of nearby ones. The respondents emphasised the sensitising role of music and the positive vibes it gave them during the COVID-19 pandemic lockdown.

Music and Arts as Dissemination Tools

The animated cartoons were used as dissemination tools. With findings from the study summarised into a one-minute cartoon strip, the productions were aired by the project's media partner on two popular television stations (African Independent Television (AIT) and Television Continental (TVC)). It was also released on the social media platforms of the Centre for Housing and Sustainable Development as well as the co-investigators platforms. It was interesting to note that it generated quite a following.

The dissemination of jingle broadcasts on radio was also done in the four major Nigerian languages. In terms of content, the jingles highlighted the preventive measures against COVID-19 infection and were specially produced to address issues of prevention on the home front; the public health messages on the proper use of face masks were also emphasized, as was the risk of accepting visitors during the lockdown. These emanated from the findings of other work packages in the project. The messages contained in the jingles were clear, concise, and persuasive. The radio jingle had the instructive statement "Make you dey wash your hands… To kick Corona out", with the English version being "Life is for the living… So, you stay alive." The last jingle, composed in the traditional Yoruba spoken word chant (*ewi*), was also simple and persuasive.

Audiovisual materials, flyers, and posters were distributed and posted at strategic places in Lagos State. Community research partners who were domiciled in the communities themselves were engaged in the publicity process, playing the jingles on public address systems mounted on vehicles driven around the densely populated selected communities.

Conclusion and Policy Recommendation

Many residents of multi-tenanted housing in Lagos continue to bear the impact of the six-week lockdown of 2020. Although the lockdown allowed people ample time with their families, many families experienced a significant loss of income, increased business instability, emotional stress, increased expenditure on food, as well as restiveness among homebound children and young adults. However, it was found that music generally served as a crucial tool of enlightenment, especially in awakening consciousness during COVID-19 preventive measures. Consequently, the findings of this study should benefit the international community, as it provides tools and strategies on how the

community spread of COVID-19 might be contained in other African cities facing similar challenges as Lagos. It is quite significant that the research is grounded in two SDGs, viz.; SDG 11.1, which is access to adequate, affordable, and safe housing; and SDG 6, which is equitable access to water and sanitation. In light of the study's findings, it is suggested that there is a need for more concerted actions toward realising those goals. These findings, which come from a humanities perspective, are indeed reflective of the sort of grounded and creative solutions required in this part of the world.

Residents of multi-tenanted housing in low-income communities readily confirmed that music and cartoon animations played a major role in sensitising them to the COVID-19 pandemic. They particularly reported that music effectively articulated the need for hand-washing, using hand sanitisers and maintaining social distance; moreover, the cartoon animation produced during this research project also contributed significantly to spreading the message about the pandemic. The respondents affirmed that music brings a positive vibe and that positive emotions are displayed through different emotions stimulated by the music, especially in a situation where the message is translated into the local dialect. The introduction of jingles in different local languages helped the messages get to the grassroots, particularly the illiterates. Using these local dialects for public health messaging ensures that it is understood and accessible by the general population.

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Chapter 4

CONTAINING EPIDEMIC OUTBREAKS: WHAT CAN WE LEARN FROM JOHN GRANT FULLER'S *FEVER?*

Frances Odueme

Abstract

Throughout the history of humankind, there have been records of infectious disease outbreaks. Invariably, such outbreaks begin in a specific area before spreading across diverse regions, given the ease of cross-border mobility in the age of globalisation. The attendant impact of such epidemics or pandemics is often multifaceted and monumental. In keeping with its objective of representing societal happenings—the intricate relations between humans and their physical environment—imaginative literature aptly depicts many incidents of epidemic outbreaks. Epidemic literature has thus helped to provide effective insights into the impact of complex human relations within the context of the environment. These literary portrayals often recreate the socio-political impact of these epidemics to mirror the torturous experiences of those affected while also detailing the various intervention strategies adopted to curb their spread and detrimental effects. Inspired by the harrowing experiences of people in different regions resulting from incessant epidemic outbreaks, writers utilise either fictional or non-fictional literature as a means to express their concern about the underlying sociopolitical conditions that trigger the infections, inhibit their control, and, therefore, engender the spread of these rampaging epidemics. This chapter examines John Grant Fuller's *Fever!*, a nonfictional text recounting the lived experiences of the people in the communities plagued by the Lassa fever epidemic of the late 1960s. The chapter explores how this literary depiction has aided in the documentation and dissemination of experiences arising from these social dealings and exchanges. It highlights the different containment and coping strategies adopted by both the authorities and the people. It also underscores the lessons that can be drawn

from this literary depiction and how these lessons can significantly impact infectious disease management today.

Keywords: Containment, Epidemic, Grant Fuller's Italicise!, Lassa Fever, Literary Portrayal.

Introduction

Over the years, emerging and reemerging contagious disease outbreaks have afflicted people in different regions of the world, posing a grave danger not only to human health but also affecting people's social and economic well-being. Much of this transborder spread of contagion is attributable to the ease of movement across borders in the modern period. Transnational borders have become more permeable in the age of globalisation, thereby aiding human interconnections and supporting the rapid spread of contagious diseases across different world locations. Noting the impact of global interconnectedness on the transmission of contagious diseases, Wald (2008, p. 8), states that "the routes travelled by communicable diseases light up the social interactions—the spaces and encounters, the practices and beliefs—of a changing world." As has been demonstrated in the ongoing COVID-19 outbreak, the movement of contagions across borders seems to have intensified in recent years because of increased cross-border travel.

Thus, events of the past few years have shown that the battle against these emerging and reemerging epidemics is from being won, as they have also demonstrated the impact of infectious diseases on the human world. These deadly infectious diseases continue to cause worldwide panic, especially given the fact that the increased wave of global travel has heightened the threat of their rapid spread across different regions of the world. As a result, epidemics are no longer considered issues that are simply in the purview of public health and clinical medicine but are also now being treated as social, developmental, and security issues on a global scale (Castillo-Chavez, C. Curtiss, R. Daszak et al., 2015). This accounts for the multipronged approaches that are now being adopted on multiple fronts, involving national and international health bodies, civil organisations and the government (Leach & Hewlett 2010).

Accordingly, creative writers and authors have elected to use their works to depict their reflections on "outbreak narratives", as Wald terms it, portraying the continued impact of epidemics on the world's populations and offering valuable insights into how people have dealt with them in the past. Bill Albertini, in "Epidemic Stories", re-echoes Wald's position on outbreak narratives, affirming that they "generate knowledge about infectious disease and powerfully shape responses to epidemics" because they have overriding

material consequences for people all over the world (Albertini 2008). Wald's stance, as upheld by Albertini, underscores the important role that outbreak narratives play in helping us understand the importance of people's interconnectedness.

Against that backdrop, this chapter analyses Grant Fuller's *Fever!: The hunt for a new killer virus (1974),* a non-fictional literary work that recounts the story of the eruption of a novel virus in Nigeria and its spread to other parts of the world, It appraises the varied response strategies from individuals as well as health and government authorities. It also examines the impact of the changes occasioned by the Lassa fever epidemic on the affected people's lives and how this could provide an understanding of how to cope with new and re-emerging epidemics. The main concern of this literary study stems from the understanding that recreated textual images may more persuasively communicate the complex realities of living through an epidemic with its attendant sociopolitical, cultural, and economic challenges. Thus, it interrogates the effectiveness of coping strategies adopted by the affected people and the response strategies deployed by health and government personnel as they intensified efforts aimed at containing the epidemic.

Reconstructing Infectious Diseases in Non-Fictional Narratives

According to Wald, outbreak narratives follow a "formulaic plot that begins with the identification of an emerging infection, includes a discussion of the global networks through which it travels, and chronicles the epidemiological work that ends with its containment" (2008). Such narratives may be imaginative, scientific, or journalistic in form. Thus, to continue to draw particular attention to the devastating effects of contagions, a growing number of writers have taken to reconstruct the fictive and actual events of epidemic outbreaks in the past decades.

Although both fictional and non-fictional outbreak narratives reconstruct close-up intimate accounts of lived experiences, the non-fictional form renders more poignant accounts, as they cite actual locations, name real places and persons and depict more prevailing and consistent information about lived experiences. In the article "Pandemic: Tracking Contagions from Cholera to Ebola and Beyond", Eric Carter (2019) contends that these writers utilise their non-fictional narratives of disease outbreaks to simplify complex scientific findings for a general audience.

Carter's assertion underscores the role of non-fictional epidemic stories in generating awareness through discourse in the public domain, outside the medical and scientific worlds. By depicting the sensibilities, perceptions and

expectations of real-life characters, such narratives tend to reveal the magnitude of the real threat and highlight local knowledge and practices as they identify the effects of infections on people's health while guiding responses to harness habits that enhance good health practices (Leach and Hewlett 2010). Yet, while reviews of fictional portrayals of epidemics have received much critical examination, there has been little review of the non-fictional variety.

In the last few decades, a fairly significant number of writings have emerged that chronicle actualities and events during different epidemic outbreaks. These outbreak narratives often express the writers' concerns about measures taken to stem the spate of emerging and reemerging contagious diseases and what best practices can be instituted for the effective containment of these diseases. Attesting to this is the array of titles of such non-fiction outbreak narratives, which share the theme of tracking deadly epidemics across different timelines. One of these non-fiction outbreak narratives, *The Coming Plague*, written by Laurie Garrett and published in 1994, recounts infectious disease progression from past times. In her thesis, Garrett points to social and environmental changes as the major factors responsible for the increasing number of cases of epidemic outbreaks (Smocovitis 2020). She observes that since the emergence of antibiotics and vaccines has not done much to stop recurring contagions, the best way to contain epidemics would be through developing a "renewed appreciation for public health" (Parmet 1995). For Garrett, the "health of all individuals depends on the health of communities in our global village" (Parmet 1995). In 1995, R. Preston published his non-fiction outbreak narrative text, *Hot Zone*, which is an "account of how researchers, locals, and governments fought one of the deadliest known viruses—the Ebola virus" (Jenei 2020). William McNeill's *Plagues and Peoples*, published in 1996, chronicles the history of contagious diseases and examines their impact on human cultures. Other similar works include Mike David's *The Monsters at Our Door* (2005), Mark Walter's *Six Modern Plagues and How We Are Causing Them* (2012), and David Quammen's *Spillover* (2012). Carter (2017) describes Sonia Shah's *Pandemic* (2019) as a book that "basically parallels the course most pandemics take" as it provides details about the "evolution and spillover" of pathogens.

Undoubtedly, stories and accounts of disease outbreaks tend to promote awareness and stress the need for effective containment strategies. As Carter (2017:96) points out, writers have managed to use their accounts to untangle the "complex dynamics of infectious disease while suggesting promising new pathways in public health—and the need for changes in the public's sensibilities—to confront epidemic threats." Thus, writers wittingly utilise

these literary recreations to trace the origins, modes of transmission, and routes of these epidemics as well as the specific containment efforts associated with them as they document the incidents and experiences of those affected across spatial divides. With their imaginative recreations, they aim to contribute to the increasing efforts on effective and efficient responses to epidemics, with the ultimate goal being to improve overall public health and well-being.

Epidemic containment approaches, as specified by the World Health Organisation, involve the processes of early warning, detection, surveillance, and control of the spread of contagion to minimise their adverse outcomes on health and other socioeconomic aspects of people's lives. It also entails identifying and examining people who may have been exposed to persons or areas where there has been an unusual occurrence of disease or public health challenges, with a view to determining the source of infection. The World Health Organisation insists that an effective and efficient emergency response can reduce avoidable mortality and morbidity rates and lessen the burden of economic and social impacts. It also stresses that prompt identification of the challenges posed by epidemic-type infections is necessary to help "coordinate and focus global resources" on containing epidemics and helping countries at risk to avoid being overwhelmed (WHO 2020). This implies that in any infectious disease outbreak, early detection and containment are crucial for curtailing rapid spread. Leach and Hewlett note that "lack of attention to the public and their knowledge in helping to contain outbreaks," as captured in most outbreak narratives, has in the past impeded effective containment of contagions. This submission suggests that, in addition to being on constant alert, the world must be prepared to work together with all concerned to detect and respond to international infectious threats through relentless communication and collaboration.

This chapter, therefore, explores how non-fictional literary representations, as exemplified in Fuller's *Fever!*, have helped to communicate coping strategies by individuals living in the affected communities, in addition to specifying the containment efforts by health workers and government authorities. It also highlights factors that may have impeded effective containment efforts as it examines the multidimensional impact of epidemics on the population during the period of disease outbreak. Thus, it is hoped that the study will help reveal how to better manage the adverse human attitudes arising from the psychological effects of the epidemic outbreaks with a view to drawing lessons for effective containment strategies in cases of future outbreaks.

The framework for the discursive analysis of this paper is drawn from John Dewey's theory of pragmatism, which emphasises the priority of experience

(Maddux & Donnett 2015). The theory states that the structure of knowledge is not static or unchanging but functions as an action that modifies previously existing knowledge (Riga 2020). This suggests that people build on their knowledge base with a series of experiences. This assertion is affirmed by Riga's submission that knowledge is acquired "through the processes of experiencing, thinking, and communicating" as humans interact with the environment, aiming "to change it, be changed by it, and come to understand it". These processes, as Riga suggests, make it easier for people to learn from their own past experiences and those of others. The learning processes also aid in the identification of what constitutes a problem and determine "what actions the specific situation demands" (Riga 2020).

The choice of research approach is premised on the need to provide an understanding of complex human experiences and interrelationships as represented in the text. Thus, the theory is utilised to explain the significance of sustained information as human beings continually interact with their environment as well as with other people within and outside their locale. It is believed that this critical framework will help to explain the necessity for individuals to learn from experiences of happenings around them and to utilise such experiences to organise their environment and interactions with each other and the environment, especially in the wake of epidemic crises.

Containing Lassa Fever in John Fuller's *Fever!*

Epidemic-type diseases and other infectious diseases, which portend danger for people living in different locations across the world, have continued to escalate in today's world, hampering the health as well as the social and economic well-being of global populations. John Grant Fuller's *Fever!* is a literary recreation of real-life experiences that retells the story of an epidemic that broke out in the small town of Lassa in Borno State, Nigeria, in the late 1960s. The scenario, as detailed in the text, is akin to that of the coronavirus infection, which reportedly broke out in one part of the world but later became widespread across the globe. Like the present COVID-19 pandemic, which has remained irrepressible, at the time Lassa fever was first reported, no one had an inkling that the index case—which started with mild symptoms of aches and fever—would prove to be an ominous warning of a potentially dangerous strain of a new virus. It was only later that serological studies indicated that the lethal Lassa fever virus infection occurs over a wide area of Western Africa, extending from Guinea to Nigeria (Fuller 1974). According to Leach and Hewlett (2010), Lassa fever has come to be acknowledged as "an unheralded problem" that must command global attention. This is because adverse conditions in one country can impact the entire human race, given the interconnectedness of the modern world.

Fever! recreates the living conditions of people whose lives were impacted by the outbreak of a novel virus infection, Lassa fever. It is a story of the lived experiences of people in the towns where the Lassa fever epidemic first broke out and what its movement to other regions portends for global health, as well as the social and economic well-being of people worldwide. Thus, this section examines Fuller's accounts of the actual happenings during the infectious disease outbreak, highlighting containment approaches and useful measures to cope with and contain prevailing outbreaks. In exploring the people's collective experience and sensitivity during this period, the study seeks to unearth how the changes occasioned by the socioeconomic and psychological impact of living amidst the outbreak may have engendered undesirable social outcomes, which in turn impeded the containment of the epidemic-prone disease.

In recreating the accounts of real-life happenings during the breakout of the epidemic, Fuller accounts for the origins and epidemiology of the Lassa fever virus while also highlighting the intervention strategies devised by health authorities to curb its spread as well as the measures adopted by individuals to cope with the alarming experience. The details of the arduous research and efforts invested in diagnosing and curtailing the spread of the new strain of the virus and the search for vaccines are equally outlined in the narrative, which details people's reactions to the spate of infections.

Lassa fever, an acute viral haemorrhagic disease located in a non-human host, is believed to be transmitted from person to person through a break in the skin and other bodily fluids; it is also believed to be contracted through breathing in infected droplets (WHO). Lassa fever is named after the village in northern Nigeria where the outbreak first occurred. It is believed to be asymptomatic in about 80 per cent of cases, while in some other cases, it causes only acute illness (Leach and Hewlett 2010). The virus, which lives in rodents, is transmitted to humans via the urine of the host animals. After being first reported in Nigeria, the virus was transported to and contracted in the United States of America. It was subsequently detected in the other West African countries bordering Nigeria.

As captured in the text, the potential of Lassa fever to cause mayhem as it began to spread across borders offers ample lessons for the effective management of the current COVID-19 pandemic. Fuller's account highlights the scourge of Lassa fever, an epidemic-type infection, and may be described as an archetype of outbreak narratives, which, according to Wald (2013:443), "trace a disease that begins with a disease appearance—its emergence—and ends with a closure". Although the virus was regarded as a novel infection, it

was also suspected that it could have already caused many unknown and unreported deaths in that region of the country (Nigeria) prior to the identification of the index case in Lassa village. For instance, in reviewing the history of diseases in Africa, Bob Kissling, a chief virologist at the Center for Disease Control (CDC), noted that the Lassa fever virus had not been occurring in the Western African region for the first time at the time it was first reported. He found striking similarities between "an epidemic that had decimated several large population centres in Sub-Saharan Africa fifteen years before the Jos outbreak" with a mortality rate of 60 per cent (Fuller 1974). He, therefore, concluded that it was likely the same Lassa fever virus that had been responsible for that plague.

As indicated in the text, the first case of Lassa fever infection was reported as a hospital-transmitted infection from one missionary nurse to another. In the index case, Miss Laura Wine, a 69-year-old American missionary nurse, was working in the little hospital in Lassa village When she took ill, she presented symptoms that are similar to those of malaria. However, her condition failed to improve after being admitted and treated at the hospital where she worked. Given the exacting nature of the ailment and the determination of the chief medical officer, Dr. Hamer, to unravel the cause and nature of her ailment, Miss Wine was later moved to Sudan Mission Hospital in Jos. Although she was placed under intensive care, six days after she became ill, Miss Wine passed away. It became clear to her colleagues at the hospital and the entire medical team that she had been killed by an exceptionally potent virus. Given that, no member of the medical team was certain of the nature of the virus, especially where and how Miss Wine had gotten infected, there was considerable apprehension among them.

The infection of a second missionary nurse, Charlotte Saw, at the Sudan Mission Hospital, Jos, heightened concerns around the hospital. Charlotte Shaw had helped in caring for Miss Wine, and her infected status became apparent barely eight days after Miss Wine's demise. While being examined, Shaw reported that she felt a stinging sensation on the small wound that she had on her finger when fluid soaked through the gauze swab on her finger while swabbing nurse Wine's throat (54). This situation correlates with what Albertini describes as "accidental infection," which occurs when one individual who is accidentally infected by a virus "in turn infects others through a shared accident of simultaneous presence" (2009).

Another case of accidental infection manifested when Penny Pinneo fell ill after helping with Shaw's medical care and with the subsequent autopsy on her corpse. Thus, the rapid spread of the virus from one health worker to the next

continued unchecked. This moment of "accident", which Albertini (2009:444) describes as "the most powerful work done by outbreak narratives," depicts the tension between the desire for containment and opposing accidental exposure and infection.

With Pinneo's move from Jos, Nigeria, to New York, USA, her case not only became a test case for the successful curbing of the contagion but also opened a channel through which the virus eventually replicated in a different location from where it originated. The case of another nurse, who was infected in Sierra Leone and moved to the Hospital for Tropical Diseases in London for more effective management, also contributed to jolting the world in general and the medical world in particular to the danger of the potential spread of the virus (Fuller 1974). Thus, the tendency for rapid spread across borders was enhanced as sick and infected medical personnel were frequently moved to their home countries. Thus, as demonstrated in the text, infectious disease outbreaks can easily cross borders to threaten economic and regional stability.

Accordingly, *Fever!* depicts the impact on people's socioeconomic activities and general well-being across the different locations to which the infection had spread. Considering the new-age ease of movement across national and international borders and growing concerns that the prevalence of the virus even in remote and faraway regions of West Africa could spell doom in the U.S. and around the world, a response strategy had to be put in place. The directives issued by officials of the U.S. Public Health Service in New York, which were to be implemented at international airports across the country, served as a control strategy to ensure that infected persons were not unwittingly allowed entry into the country without proper monitoring. The improvised procedures at the international airports included temperature checks, scrutiny, and screening of travellers returning from Africa, especially from Nigeria. Any such traveller with indications of any ailment was either sent to Columbia Presbyterian Hospital for a thorough check-up or quarantined (159/160). As related in the text, however, this containment policy did little or nothing to curb the eventual replication of the virus. This points to the inappropriateness of the incidental response measures.

Remarkably, the first victims of the novel disease outside the place where the virus originated were Jordi Casals and Juan Roman, who were staff members of the Yale Arbovirus Research Unit, USA. The infection of these laboratory scientists in the course of their duties—working with others to identify the virus-carrying vector and mode of transmission and to ascertain the presence of antibodies in the serum taken from Pinneo—signalled impending doom. While Casals was healed after being ingested with the convalescent serum

from Pinneo, Roman died before it was established that he had also been infected with the virus. As expected, the U.S. Public Health Service, which was already concerned about the danger posed by the new virus to researchers and the public, responded by ordering the cessation of all research at Yale involving a live Lassa fever virus.

There were also directives that all live Lassa specimens were to be moved to the Center for Disease Control (CDC) laboratory in Atlanta (Fuller 1974). The directive that all research into the virus infection, as well as all efforts at finding a cure and producing a vaccine, be handled in the CDC laboratory reflected a desire to protect laboratory staff and contain the further spread of the infection. Thus, the anxiety and fear generated by the infection of the laboratory staff reverberated across the world, intensifying concern about what Albertini describes as a "close relationship between protection from the threat of infection promised by the laboratory" and the possibility of an accident produced by the laboratory. Although the laboratory works to contain deadly pathogens and assuage public fears, in certain instances, it also generates significant anxiety about accidental infection (2009).

In Nigeria, Jos had gained the notoriety of being the epicentre of the Lassa fever epidemic, as indicated in the text. This may have accounted for the author's detailed account of the efforts made in Jos by the combined team of researchers and virologists from the US and Ibadan to unravel the source of the virus infection and to locate the virus-carrying agent (Fuller 1974). A combined team of scientists and researchers had to be delegated to the hotspot as the infectious disease raged. The team, which was made up of Jordi Casals and nurse Pinneo, joined Don Carey and Graham Kemp in Nigeria, while Tom Monath and other researchers and the WHO team worked in Liberia. With the support of tropical diseases expert John Frame in New York and virologists at the CDC, the teams of researchers focused on unravelling the mystery behind the viral infection. For them, it was imperative to find out if there were individuals who might have been previously infected by the virus but had no knowledge of their status. The researchers had also hoped to find people who may have survived the virus attack and may have antibodies that could be used to treat new cases of the epidemic. However, the account underlines the arduous process of collecting blood specimens with which to conduct the investigation. The people were reluctant to cooperate with the researchers. People were unwilling to allow the medical team to take their blood samples in Jos, Nigeria, to Zorzor, Liberia, and Panguma, Sierra Leone. This presented the researchers with the difficulty of getting cases identified:

> The same type of problem that had arisen in Jos and Zorzor plagued the team. The local chiefs were often resistant or indifferent to blood-letting campaign. Reactions of the villagers differed: some thought the bleeding will do them good; others resisted it (261).

As mistrust of the personnel and procedures adopted heightened, people began to rely more on traditional mores and taboos, religious practices, and beliefs in traditional remedies. Conversely, research efforts were further hampered by the populace's mistrust of the containment process.

Explaining the motive for such scepticism among community members, Jenei (2020:1) contends that the "use of the scientific method alone, without consideration of contextual factors, is not sufficient to control an outbreak". Such top-down hierarchical responses and control measures, according to Leach and Hewlett, have often proved untenable in outbreak containment and control. This points to the fact that involving community members in the early phases of any response strategy could pave way for cooperation and meaningful collaboration, leading to the achievement of desired goals. No doubt, the concerted efforts of all concerned, especially those of local health authorities and researchers, would have stemmed the tide of infection and saved many lives.

Since the virus first occurred in a hospital setting and got transmitted through contact with the index case, considerable precautions were taken in and around the mission hospitals. For instance, in the Bingham Mission Hospital in Jos, where the virus claimed its first known victims, infected patients were isolated and treated in separate rooms. Moreover, healthcare workers were provided with Personal Protective Equipment – comprising face masks, rubber gloves and gowns. Frequent hand washing, especially after attending to patients, was also encouraged, despite the shortage of water supply; according to the text (Fuller 1974), "there was barely enough trickle to wash hands.'' In addition, members of the public were encouraged to cultivate and maintain healthy and hygienic habits.

Yet, amid these containment measures, accidental infections in the hospitals kept rising. Most of the nurses and other hospital staff in Sierra Leone and Liberia who contracted the virus ended up dying from the infection. Dr. Jeanette Troup, the head surgeon at Bingham Hospital, who had spearheaded the containment process, also contracted the same infection she was trying to control. Her death proved the inadequacy of the containment measures being adopted, with health authorities now desperately fearing for the safety of the millions of helpless, hapless citizens whose living conditions were

undoubtedly deplorable. In densely populated areas, therefore, the outbreak continued to ravage the populace, as health facilities were ill-equipped and unprepared for it.

As evident in the text, the absence of sustained public health messages forced infected people to resort to self-help. They turned to uncertified herbal potions, as demonstrated in the case of Raphael, the Jos Mission Hospital Dispenser (Fuller 1974). Reports on the spate of infections and fatality rates of over fifty per cent (Fuller 1974) escalated concerns among members of the public to great proportions, ranging from feelings of apprehension to outright terror. For instance, without the permission of health authorities, the relatives of many inmates abruptly took them away (Fuller 1974). Arising from the unease that pervaded the affected areas, the inhabitants adopted several measures aimed at keeping them from contracting the virus. For example, people began boiling their water and filtering it more than once before drinking it (Fuller 1974). They were also cautious about contact with mice and other rodents, even as they became wary of anyone with the flu, keeping such a person in isolation until medical help could be sought (Fuller 1974). Nonetheless, given the living conditions of people in the villages and towns, the coping strategies proved to be grossly inadequate. Once there was a major outbreak, there was little or nothing that the people could do to protect themselves.

While some may have resorted to self-help, other members of the affected communities were outright aggressive, refusing to cooperate with medical teams. Antonio (2019) attributes this antagonistic behaviour to the psychological consequences of experiencing a contagion outbreak. According to Antonio, arising from fear and healthy anxiety, psychological consequences such as emotional distress may result in maladaptive behaviour and even socially disruptive behaviour which in turn hamper effective containment efforts, as highlighted in the Liberian case wherein medical teams encountered considerable resistance. In this regard, public enlightenment campaigns and counselling would have done much to assuage people's fears and reassure them of the authorities' support.

To be sure—and as Grant Fuller affirms—poor living conditions play a major role in the spread of viruses. Most of the patients lived in deprived, dusty surroundings with poor garbage disposal and sanitary facilities. Such living conditions may therefore be considered key factors that contributed to the surge of the epidemic. As the author points out:

> But beyond the hospital scene, what else was there in common among the first patients to come down with the disease? Slowly, a

> picture began to emerge. Many of the patients lived in an area of Jos along Kazaure Street, a highly significant geographic cluster that gave the researchers a lead (Fuller 1974).

This is also evident in the relationship among the initial reported cases of the epidemic. As Dr. Kemp, one of the lead researchers in Jos, numbered the cases in the order in which they were reported, it became apparent that the patients were people who lived within an approximate range. He reports:

> Case 17 was the husband of case 2. That Case 20 was the nephew of Cases 14 and 21 and the brother of Cases 23 and 24. That Case 21 was the husband of Case 14. Case 14 was the aunt of Cases 20, 23 and 24 (Fuller 1974).

As also observed in the text, there were similar "clusters of cases from the same compound and communities" in Panguma, Sierra Leone (Fuler 1974). Thus, as Jenei sums it up, the concept of physical distancing may be just a dream for those without homes or adequate shelters or who reside in remote communities and lack access to running water and medical attention (2020).

Policy Recommendations

Housing Condition

The study finds that those most affected by the epidemic were among the low-income population whose housing units consisted mostly of a cluster of houses. Their surroundings were dusty, and their garbage disposal and sanitary facilities were in parlous conditions, making it difficult to curb the spread of viral infections since these attracted rodents that carried the virus into or near dwelling units. Another case in point is the outbreak of yellow fever infection in Jos, just before the onset of the second wave of the Lassa fever epidemic. Although there was an existing vaccine for yellow fever disease, the living conditions of the people in and around Jos aided the rapid spread of the disease. Moreover, in Lagos, where Tamalama, the Jos second-wave index case was traced, the housing and general living conditions were not portrayed any differently. The house where she lived with her family in Lagos is described thus: "a dark little one-room house with a clay-baked wall; and as a part of a long row of houses in a rather shabby section of Lagos" (243). The housing units in which most of the infected people lived were made up of clusters of congested living quarters, thereby aiding the spread of the virus. Thus, many lives were lost in the epidemic simply because of poor living conditions.

For effective control of the spread of infectious diseases, government and corporate bodies should pay special attention to the living conditions of citizens. There is a need for the provision of adequate housing units and the maintenance of amenities such as potable water and waste disposal facilities, etc. This will help to check the spread of any infectious disease. The government should ensure that there is proper vulnerability mapping (the planning and selection of communities) in multi-tenanted communities and slum dwellings that are more susceptible to the disease other than in settings.

Communication

There was also an absence of public health messages to keep people appropriately informed. Perhaps this may have contributed to the people's distrust of government policies, even as they held on strongly to their belief in traditional mores and taboos. As shown in *Fever!*, this attitude prevented people from fully cooperating with members of the investigating team. For instance, even after health officials persuaded the local chiefs to permit the taking of blood samples from the people, researchers continued to be subjected to other strict requirements before they were allowed to take the needed samples (Fuller 1974). Extensive campaigns based on public health messages would have helped to sensitise the people and allay their fears while reassuring them of government support. This would have paved the way for seamless and widespread testing of the people, possible isolation of the sick, and the collection of the needed specimens from those with strong immune systems who survived the disease.

It is recommended that government and local health authorities engage in sustained and expanded programmes of public sensitisation. This may include word-of-mouth accounts, billboard advertisements, radio shows, simplified messages, jingles in major local languages and Nigerian Pidgin English, as well as animations (especially for children) in electronic media and on social media, which can easily be accessed on mobile phones. This will help further extend the reach, as it will help curb the spread and mitigate the effects of an epidemic or pandemic on the populace.

The text *Fever!* provides some form of closure or containment in the end through the identification of the vector as well as the tracing of the index case in the second wave of infection and the production of an effective serum. There is strong evidence from the narrative to the effect that the underlying social and economic factors will continue to pose challenges to containment efforts in the future if not properly addressed.

Conclusion

As observed in the text *Fever!*, the impact of any epidemic on society is far-reaching, as all aspects of human life are bound to be affected. The cause of an epidemic's escalation, even while attempts are being made to control it, maybe the poor approach to managing it. Consequently, there is a need for concerted efforts by the global health community, governments and organs of governments, corporate and private organisations and community members to support all efforts to identify emerging infections, curb their spread, and develop effective vaccines and courses of treatment against them. Ferhle (2016) succinctly captures this when he states that the human community, as captured in outbreak narratives, holds an ambivalent position that harbours both the threat of spreading infection and the possibilities for its cure.

However, as depicted in the text, the incident-management approach, which is a reactive strategy, may be grossly inadequate in containing an outbreak. Thus, it is necessary to devise strategies that transcend simple issues of health and hygiene and address the underlying political, social, and environmental dynamics. For instance, the policy measure of physical distancing, which has often been adopted as a major containment approach, is impracticable for those who live in multi-tenanted housing units, those without proper homes and shelters or those who live in remote, neglected communities without access to running water or primary medical care. Thus, beyond these surface concerns are the major underlying issues that need to be given serious consideration—issues that are crucial to the harmonious existence of humans in their natural habitat.

Indeed, as the findings show, those who were worst hit by the epidemic were those living in dirty, congested surroundings made up of inadequate cluster housing units. As also observed in *Fever!*, public sensitisation of the masses with sustained health and safety tips would have helped in stemming the negative impact of the Lassa fever epidemic. In the present COVID-19 situation, wherein many citizens, especially in Nigeria, are not attuned to the idea of social distancing—perhaps because of sociocultural leanings and a communal style of living—there is a strong need for sustained sensitisation of the masses. Since it may not be possible to immediately alter the current pattern of housing units in Nigerian cities, the government should put measures in place to help citizens, especially those living in tenement housing units, cope with the current pandemic.

Certainly, serious attention should be directed to these prime concerns if containment efforts and coping strategies are to yield any favourable results. There is also a need for people to be constantly reminded of their responsibility

to themselves and others around them or those they are very likely to encounter. Not only should government guidelines on how to maintain a safe distance be stressed to the occupants of multi-tenanted housing, but such residents should also constantly be reminded through various media and in different languages about what is required of them, especially those living in a city such as Lagos that is inhabited by people of multi-ethnic backgrounds. No doubt, there is a need for people to be continually reminded of the importance of maintaining clean surroundings while maintaining high levels of personal hygiene. Advice on the management of sick persons or those who may present symptoms similar to those of COVID-19 should also be disseminated to the people regularly.

The in-depth description of the events and occurrences surrounding an emerging disease as portrayed by Grant Fuller, provides readers and the public with firsthand information on coping and containment strategies. The numerous lessons that it offers point us in the direction of coping with the coronavirus disease and indeed infectious disease situation in general. These pragmatic lessons can help stakeholders understand the environment better, with a view to helping us adjust our behaviour to address local and global challenges.

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Chapter 5

EFFECTIVE MANAGEMENT OF INFECTIOUS DISEASES OUTBREAK IN MAIK NWOSU'S *INVISIBLE CHAPTERS*

Lola Akande and Timothy Nubi

Abstract
This chapter offers a close reading and textual analysis of Maik Nwosu's Invisible Chapters. It highlights the capacity of residents of slum settlements in Lagos to manage infectious disease outbreaks in spite of perceived gross injustices and inequalities between them and the elites. The chapter emphasises the prophetic capacity of fiction to foreshadow likely occurrences such as the outbreak of a pandemic and insists on the responsibility of the government to plan ahead. It pays particular attention to the author's portrayal of city structures, the perennial housing problem in Lagos, and the reasons for the failure of the city to be as liveable as it ought to be for residents across social classes. The chapter uses the Marxist approach to interpret the novel, dwelling on how Nwosu expresses his concern about the continuous dehumanisation of residents of multi-tenanted houses by portraying his slum-dwelling characters as unfortunate victims of abuse and misuse of power by city planners. In illustrating the distrustful relationship between slum dwellers and the government in Lagos based on past neglect, the novel borrows from history and fictionalises the actual event of the demolition of Maroko by the then government in Lagos State. The chapter thus casts a light on how the existence of communal love and true friendship among residents of multi-tenanted settlements offers possibilities for coping with a pandemic.

Keywords: Infectious Disease, Invisible Chapters, Maik Nwosu, Maroko, Multi-tenanted Housing.

Introduction

Fiction is a product of the imagination that can link one generation to another just as it can link one city to another. Interestingly, both fiction and the city are derivatives of the imagination, since a city is an imagined community that is displayed in real life. Over the years and across cultures, happenings in the environment—in this case, the city—have been responsible for the production and consumption of fiction. It is therefore important that what we read as fiction should be capable of improving the quality of living in the city.

There is no doubt that the house and the environment in which it is located have a profound influence on human health and efficiency, as well as on personal satisfaction and social behaviour. Indeed, it is immensely important to be able to provide an adequate number of dwellings that satisfy reasonable standards of comfort and hygiene while also providing essential utilities and services for community life. Shelter is acknowledged to have a profound impact on people's lifestyle, health, growth, happiness and productivity. An overview of the housing sector in Nigeria clearly reveals that access to adequate and affordable housing remains elusive to many Nigerians, both in urban and rural areas. The supply and demand disequilibrium for housing has continued to widen as population growth continues to outpace the production of housing units. About 60% of Nigeria's population of over 167 million lack "adequate housing." The country's current housing deficit is about 16 million units, of which 38% are said to be in the Lagos housing market alone. Although the housing inadequacy is felt more by the less advantaged groups (low-income earners, the displaced, youths, the elderly, the physically challenged, etc.), even members of the so-called middle class have started to feel the effects of the acute housing shortage. The current deficiency, in addition to projected demographic trends, points to the need for several million housing units to be built across the country in the coming years, as well as for several million to be elevated to decent standards.

The nexus between housing and health is recognised in several international treaties and national policy documents. To be sure, overcrowded homes harbour the agents responsible for diseases of various sorts. To stay healthy, children need to live in healthy homes, and there is no doubt that decent housing in a clean environment is critical to the prevention and care of Ebola, AIDS, tuberculosis, malaria, and various other diseases (Nubi, 2015). Overcrowding undoubtedly has grave implications in a pandemic, especially as presented by the current COVID-19 emergency. Given the population of Lagos, the city became the epicentre of the coronavirus in Nigeria. In this connection, Maik Nwosu's *Invisible Chapters* is one work of fiction that prophesies and reflects on the dangerous consequences of poor housing in

Lagos by chronicling the traumatic experiences of residents of multi-tenanted Maroko, a former slum in Lagos now gentrified, during the outbreak of an infectious disease. *Invisible Chapters* was carefully selected for this study because of the close relationship between the concerns of the novel and an actual event in history. Because the novel is a recreation of what actually happened in Lagos, its interpretation and analysis are almost entirely empirical. The primary objective of this chapter is to show the relationship between the city and literature as well as the interconnectedness of fiction with real-life occurrences such as the outbreak of a pandemic. It shows the resilience of the residents of the fictional Maroko in the face of an infectious disease outbreak and demonstrates the people's incredible energy and capacity to curtail the spread of the disease by resorting to self-help following their neglect by city planners.

Literature Review and Theoretical Positioning

Diseases and plagues, whether natural or human-induced, have always been part of human reality. Literature, as a reporter of life's events, has the responsibility of retelling the events in order to document and curate history. For example, although situated symbolically, a plague epidemic that ravaged Algeria is the focus of Albert Camus' 1947 novel *The Plague*. Similarly, Elechi Amadi documents the 1918 flu pandemic in his 1969 novel *The Great Pond*. Karen Thompson Walker's *The Dreamer* (2019) also provides a fictional account of a deadly sleeping sickness in California, while the Black Death is at the core of Giovanni Boccaccio's *The Decameron* (1353). There are even more examples of such works in literature and film, such as *Saturday* by Ian McEwan, a 2005 novel that recreates the Huntington's disease afflicting its protagonist, and the motion pictures *Contagion* (2011), *The Ebola Syndrome* (1996), and *I Am Legend* (2007), which retell stories of various diseases that have ravaged humankind. It is in this regard that Maik Nwosu's *Invisible Chapters*' portrayal of an epidemic that plagues the fictional characters in Maroko, a slum in Lagos, Nigeria, attests to how history has always depended on writers to tell the stories of the moments they lived in.

This study employs Marxist criticism in the interpretation of the novel because Nwosu betrays specific Marxist biases by portraying his characters as unfortunate victims of abuse and misuse of power by the state actors who are responsible for planning the city. Marxist critics are interested in the internal structure of the environment, including the city, and in why and how the repression of people in the lower class affects city management. Ideas within the Marxist mainstream are a weapon of struggle promoted by affirming that ideas, after a given form of acceptance by a populace, actually constitute themselves into substructures, and if ideas are that powerful, then they ought

to be utilised. And Marxists deploy ideas in various ways. In literature, Marxists want to change what they perceive as gross injustices and inequalities existing among residents of the city, which they believe have been created by capitalist economic relations. One of the greatest indices of measuring existing inequalities among residents in Lagos is through housing conditions, which predispose residents of multi-tenanted neighbourhoods to greater danger in the event of a pandemic. The Marxist concept of 'economic determinism' is relevant to this study, given Karl Marx's insistence that every society is influenced by the specific economic structures and relationships in place. Hence, in Lagos, the relative economic disadvantage of residents of slums and low-income multi-tenanted neighbourhoods determines and shapes the government's response—or lack thereof—to their challenges. Marxists reject poverty and slumming in the city, declaring that slum dwelling and poverty are not divinely ordained but result directly from capitalism and the control of the means of production by a bourgeois, elite minority in the city.

Context and Scope of the Research

By looking at fiction within the context of COVID-19 management in multi-tenanted housing in Lagos, this chapter shows that Nigerian fiction writers have written and depicted situations in their writings that describe the psychological kinship between them and their environment and have succeeded in helping readers make sense of their 'ordinary' lives. In *Invisible Chapters*, although the residents of the fictional Maroko slum are government rejects, they are able to organise themselves and successfully de-escalate the outbreak of an infectious disease. Thus, Nwosu demonstrates through the novel that contrary to the negative image of Lagos as a city whose design discourages empathy among residents, the city of Lagos actually encourages empathy, as people tend to rely on one another in dire situations, such as during a disease outbreak.

This chapter, therefore, focuses on the examination, interpretation, and analysis of events in the lives of residents of Maroko, thereby staying strictly within the world of the novel. The research analyses the overt and covert submissions of the author through the utterances and conduct of the characters, as well as whether the characters' lives ultimately amount to glory or ruin.

Slum Conditions, Eviction, and Vulnerability to Infection Disease as Portrayed in the Invisible Chapters

Invisible Chapters tells the story of the determination of Maroko residents to sustain their livelihoods, friendships, and the spirit of oneness existing among them in spite of the decision of the military ruler, Governor Omo-ale, to demolish their slum and the oppression they face from sadistic landgrabbers

who do not waste time in converting the slum dwellers' erstwhile shanty town to their own and renaming it New Queenstown.

At the outset of the story, Maroko, a slum settlement in Lagos, has been demolished, with the residents now resettled at New Maroko. While those the government claims have valid papers are resettled by its agency, the New Maroko Development Board, those it claims do not qualify for resettlement because they do not possess valid papers have also resettled themselves illegally, thus turning New Maroko into yet another haphazard slum settlement. The residents, now of New Maroko, cannot easily put the experience of the old Maroko behind them, as it was the place where they had lived as members of one large family, sharing in one another's joys and sorrows. They, therefore, decide to undertake a nostalgic but harmless march to the old Maroko, now known as Queenstown, on the first anniversary of the demolition to hold a vigil.

To their consternation, however, they discover on arrival that not only is Queenstown now being inhabited by new landlords but also that the new landlords have secured the full protection of security forces who have been detailed to keep off trespassers. The police officers on guard at Queenstown threaten to unleash violence on the slum dwellers, a situation that compels the females among them to resort to the ancient practice of stripping naked to lay a curse on the police chief and to strike fear in him. The entire experience reopens the wounds of their severance from the slum and instills in them a renewed determination to henceforth protect their dignity and oneness. The New Maroko is, therefore, not just another multi-tenanted settlement but also one with a strong emotional investment.

Unfortunately, the settlement has lost some of its most colourful inhabitants, including Ignatius the Hunchback, an ace fisherman; Goomsi, the illegal immigrant who moves from one odd job to another, even as 'a gentleman beggar,' until a train accident puts an end to his life; and Madam Bonus, perhaps the most colourful of the three, who can outdrink anyone. In spite of their losses, New Maroko can still boast of many interesting characters, such as Prinzi, the "writer" who runs a snack bar "principally for artists" (8); Haile, but eventually failed to earn a degree" (7); Ashikodi, who, although lives in Coconut Island, is a denizen of Prinzi's café; Centigrade, the community's 'doctor'; Segilola, the adopted daughter of Madam Bonus; as well as ex-convicts and returnees from the Biafran War. The New Maroko even has a Kaabiyesi-a traditional ruler, whom no one has ever seen but whose mythical influence is promoted by Shanka and Alhaji Kaita Alhaji.

A careful reading of the novel reveals the deplorable living conditions in multi-tenanted settlements in Lagos. In showing his concern about slum dwelling as a defining characteristic of Lagos, the writer seems to be in agreement with Adepoju Onibokun (1973), who identified the conditions shaping the physical environment of cities in developing countries. Onibokun reported that "most of the cities in developing countries are plagued with slums," while arguing that "a slum does not emerge on its own" but "is created by the actions and reactions of people" (424). Sadly, decades later, the situation remains the same. Through his fictional characters in *Invisible Chapters*, Nwosu provides an exposé on the causes, nature, complexities, and implications of slum dwelling, which could have far-reaching ramifications in a pandemic situation. One of the lessons to be learned from the novel is that slum dwellings and settlements are created by a combination of factors, including poor governance, which manifests as a lack of proper planning, the adoption of double standards in tackling issues, insincerity, trivialisation of serious state issues, and outright misuse of privileges by agents of government.

The decision to demolish the fictional Maroko appears to have been taken without adequate planning for the resettlement and little or no consideration for the well-being of the people, leading to inadequate provision of alternative housing for the ejected former residents. The government officials assigned with the responsibility of allocating houses at New Maroko are complicit in compounding the slum dwellers' woes. Consider, for example, the following scenario in relation to the criteria for the allocation of apartments:

> Well, we can't assign you a room in the New Maroko. You do not meet the character requirement. You are free, of course, to appeal the decision of this board (101).

To further make a mockery of the exercise, only those who possess the "basic requirements" in the form of "a lease agreement or a proof of house ownership" (110), among the slum dwellers, can hope to be considered for selection or rejection. Even then, the 'lucky' few among them who eventually get selected have yet another ridiculous hurdle to cross: They must declare their loyalty and support for the government in power. For others, who constitute the majority and have lived in rented apartments at Old Maroko, they are summarily disqualified from seeking allocation at the 'New Heaven.' It is instructive that even in spite of the dubious criteria used in allocating housing slots, the actual houses available at New Maroko are grossly inadequate to cover the number of resettlement certificates issued by the government, thus leading to another falsehood being sold to the evacuees by the Resettlement Board to the effect that although the "settlement had been carefully planned, the Resettlement

Board was moved into making more allocations than are allowable." The consequence is that:

> The unfortunate ones, and those whom the board had classified as illegal residents in Maroko, are presently setting about erecting their own shanties. The result was that the new settlement began to look more like the shantytown that was Maroko than the government-promised New Town (133).

Clearly, therefore, the slum dwellers are being taken for granted by a government that could not care less about their well-being. It is instructive that throughout the novel there is no sign of government presence, not even to inspect the facilities available or to assess the impact of the forced movements on the poor residents.

> The uprooted men, women, and children that poured into New Maroko realised early that they had to resettle themselves. The Resettlement Board, which had promised to be "available" to welcome "genuine" tenants, was nowhere evident (129).

Obviously, then, the slum dwellers have been abandoned to their fate. A description of the physical locale of Maroko through a narrative about the amazon of the novel, Segilola, shows the sordidness of the residents' living conditions:

> She switched off the light and sat in front of the window. From this vantage point, she could see virtually all of Maroko—the rusty zinc and the thatched roofs held down with stones and all sorts of rudimentary anchors; the wide veranda of Alhaja Osunwunmi's house, the tallest in the neighbourhood; the winking lights of the Green Parrot Hotel; the deserted marketplace adjacent to the motor-park, with Mama Badejo's kiosk in the foreground; the forested hill; the stilted huts by the lagoon—including the Church of Maroko beside a rickety school; and the stamp of poverty and squalor almost everywhere (61-2).

The above scenario shows the cramped, haphazard nature of slum settlements in Lagos, where residential and business houses are cramped together with little or no space for healthy cohabitation. This kind of situation makes self-isolation impossible even in dire circumstances such as the outbreak of a pandemic. Indeed, Nwosu opens up a slice of history and reveals the invisibility of residents of multi-tenanted settlements in Lagos. The characters

seem to have lofty ideas about what they want to do but they are unable to realise their potential. Prinzi desires to write a novel but can only write a sentence and publish a single short story. Razaki fails in his dreams of owning a theatre. Madam Bonus' dreams are truncated when Fela Anikulapo's Kalakuta Republic is demolished. Goomsi commits unintentional suicide when he cannot make ends meet. Moreover, Ignatius drowns when he tries to capture the biggest fish during the Maroko fishing festival.

Thus, the reader is confronted with characters whose dreams, visions and aspirations are largely stifled by a government with the tendency to truncate citizens' aspirations. A close examination of events in the lives of these characters suggests that the government is mainly responsible for the truncation of the characters' dreams. One, the government fails to provide an ideal environment that can engender and promote the translation of lofty dreams into positive action. Two, the government is also unable or unwilling to provide essential services and basic amenities such as good roads, potable water, schools and employment opportunities.

Another reason for the New Maroko's haphazard nature is the continuous upsurge in its population. Although the settlement is already overpopulated and the facilities (if any) are dangerously overstretched, New Maroko continues to play host to more people throughout the novel. In a heated conversation with a journalist, Prinzi quips: "Land is still at the centre of our conflicts. […] land and its resources. Where the land doesn't have any, those in power grab it anyway and carve it up for profit markets. That was what happened to Maroko" (162). As residents of New Maroko grapple with the scarcity of space, the Biafran War returnees who were not among the original inhabitants of the old slum are warmly received and accepted as settlers in New Maroko. Yet, all the residents are in "a settlement clustered around an incinerator" (148).

Thus, one of the challenges of slum settlements that worsen the impact of infectious disease outbreaks is that such places are often home to squatters and the homeless. Because these areas are generally attractive for low-income multi-tenanted housing, they provide housing at much lower rates that are affordable to lower-income households. Grace Wong (2003:217) remarks that "although the household's housing decisions essentially comprise the decision to move and the selection of a new residence, the process from which these decisions are derived is very complex because varying circumstances could produce a multitude of different housing decisions". It is therefore possible to argue that multi-tenanted housing in low-income enclaves is attractive to migrants, as people tend to consider it a cheaper housing alternative and a place where small businesses thrive.

Moreover, the poor tend to better reflect the spirit of camaraderie and fellow feeling, while the rich often live in fear of attack and generally feel less secure; indeed, there is a higher tendency for the rich to lose their humaneness. The reaction of the residents of Maik Nwosu's Queenstown when the slum dwellers undertook an anniversary march to protest the demolition of Old Maroko is indicative of the lack of tolerance and absence of fellow feeling among the rich towards the poor. This is the situation in *Invisible Chapters*, where, in spite of the insensitivity of the rich, the poor residents of Maroko continue to welcome and accommodate more settlers.

A pertinent question is: How do residents of multi-tenanted settlements such as Maroko succeed in managing the outbreak of an infectious disease? This question is important because Maroko represents a microcosm of Lagos. Whenever populations rise, the city will inevitably face accommodation and sanitation problems as well as water shortages. Every city is expected to address these problems in its own unique way. If there is an outbreak of an infectious disease, these problems tend to escalate the spread of the disease, hence the need for the government to purposefully and carefully plan the city. The situation in Lagos is particularly worthy of investigation as it is the epicentre of the pandemic in Nigeria.

Nwosu's prophetic vision of the coronavirus pandemic is evidenced in the infectious disease that breaks out and ravages the fictional town of Maroko.

> New Maroko woke up with a shudder. Some of the residents went about coughing like backfiring engines. They counted themselves lucky. Kaita, whose story spread, fled abroad. Wearing a handkerchief over his face, Shanka appeared at the Bonus square to counter the story. Kaita, he said, had gone in search of a solution (177).

The epidemic claimed the lives of Quiet and Charity. Charity is a sex worker at The Bonus Club and is later suspected to have died of AIDS, thus giving the impression that the infectious disease might be sexual in nature. The epidemic throws up lessons about the dangers of overcrowding. What might not have occurred to Maroko residents was to self-isolate. But how would it be possible to isolate when living spaces are cramped with people? It is almost impossible to practise self-isolation in this kind of situation. It is necessary to reiterate that proper self-isolation is possible only when citizens have the capacity in terms of resources to do so. Yet, the government's directive on self-isolation during the coronavirus pandemic was targeted at the elites, even as the government pretended to be unaware of the living conditions of poorer neighbourhoods. In

spite of the pitiable living conditions of multi-tenanted residents, however, *Invisible Chapters* insists that it is possible for them to halt the spread of infectious disease, given how residents of New Maroko succeed in curtailing an epidemic.

> Kaita returned the day after Charity's burial with a truckload of medical personnel wearing tight gloves. They set to work immediately and managed to stop the epidemic (181).

However, because the disease has claimed the life of one of the sex workers at the Bonus Club, it becomes a business opportunity for the management of a rival brothel, Good Evening Hotel, to engage in de-marketing by claiming that all the sex workers at the Bonus Club are infected with the dreaded virus. The aim was ultimately to paralyse the Bonus Club by diverting its clients to Good Evening Hotel. The Bonus Club is at this time under the leadership of a young woman, Segilola, who eventually ensures successful containment of the disease: "She closed the Bonus Club for the time being and arranged for the girls to be tested" (180). This shows that although an infectious disease outbreak causes unfortunate loss of life, events in the novel suggest that rapid, organised and well-coordinated responses can de-escalate the negative effects of a pandemic. Therefore, in spite of the fact that the fictional city of Maroko is grossly overcrowded, only a few lives are lost to the virus. Segilola's action in the novel suggests that responsible, responsive and effective leadership are important in managing a pandemic. It also underscores the fact that private individuals and business owners, not only the government, should take responsibility for the building and development of a city as well as the sustenance of its human resources. The collective will and zeal of a determined citizenry are indeed crucial to effective governance.

One of the lessons for the government and city planners to learn about how residents cope in multi-tenanted settlements is that, notwithstanding the many associated problems, the village is not a preferred option, hence the continued influx to the city. Because of the high levels of poverty and diseases that are prevalent in the village, urban spaces tend to hold more prospects, both economically and socially. Scholars and observers of urban life, e.g., John Reader (2004), tend to agree with this position. Reader (2004) asserts that "contrary to the idealised Western view of the countryside as a haven to which city-dwellers yearn to escape, prospects are even worse in the rural areas," adding that "the cities may be poor, but the countryside is poorer still" (163). In *Invisible Chapters*, Nwosu insists on this point by using the life experiences of many characters, but Mama Badejo's experience may suffice as an illustration. Mama Badejo is a poor and twice-widowed woman with children.

She ekes out a living in Old Maroko by frying and selling bean cakes to her fellow slum dwellers before the demolition of the slum. The Resettlement Board of New Maroko refuses to allocate an apartment to her in New Maroko because she had lived in a rented apartment in Old Maroko and only those who owned houses in the old settlement were qualified for allocation in the new settlement. Now homeless, confused and frustrated, Mama Badejo decides to relocate to the village with her children to put the problem of homelessness behind her forever. Her first port of call is the family of her second and last husband before whom she realises, she is not worth more than a piece of the family's property. In this society, traditional custom demands that a widow must agree to remarry a male relative of her deceased husband irrespective of her psychological and emotional health. Mama Badejo's refusal to allow the oldest male member of her late husband's family to 'acquire' her sets her against her in-laws, who unfairly label her a husband killer.

Next, she tries her natal village, where, again, she has to constantly resist the unwelcome sexual advances of all sorts of men, even as she joins her ageing parents in their peasant farming. The worst problem that confronts her in the village is the bizarre gossip of her people, who seem unsure whether she is a witch or an accursed woman. Finally, she meets someone from New Maroko who confirms that her neighbours in the community "had not disappeared from the face of the earth" (210). This assurance imbues Mama Badejo with the courage to return to the settlement. The lesson from Mama Badejo's story is that residents of slum communities in the city who leave in search of better opportunities will always return because the condition of living in the village may be far worse than what obtains even in slums in the city. Therefore, the government must plan properly for these settlements to avoid disaster and catastrophe in situations such as the outbreak of a pandemic.

Maik Nwosu depicts residents of slum settlements as tending to live meaningless and directionless lives. Despite his strong representations of solidarity that characterise the daily lives of dwellers in Maroko, the humour of self-celebration tells of a people who never give up hope and the way they share in one another's joys and sorrows—all of which help in sometimes brightening the drabness of their lives. He conveys characters that seem to have nothing to show for their existence. It is important to point out, however, that some of them are hard-working and industrious but their businesses are often stifled by high tax rates, bullying and intimidation by government agents, as well as lack of recognition and support by the government and other potential support groups.

To worsen matters, while the intellectuals among them engage in rhetoric that promises much but delivers nothing, those with vocations barely earn enough to guarantee their immediate sustenance, let alone plan their future. As such, Madam Bonus drinks excessively to drown the sorrow of her meaningless existence, even as many others bemoan their lack of visible means of livelihood. Thus, a common feature that binds them together is their propensity to drift aimlessly. Sadly, rather than help these people by making their environment decent through well-planned, deliberate, sincere and regular government intervention, their tendency to drift is aggravated by the dubious activities of power mongers in the city. Indeed, the plight of Maroko residents in the novel is a sordid exposé of the power structure in Lagos, which the author insists is unchanging. As the story shows, in spite of the propaganda that attends the government's demolition of Old Maroko, supposedly to protect the inhabitants from disease, no sooner do the inhabitants get moved to their new settlement, New Maroko, than the supposedly new place begins to resemble the old one since the real problems of the inhabitants are left unsolved. The timing of the demolition, on Christmas Eve, is indicative of the insensitivity and callousness of the planners of the city, who continue to take the residents for a ride on account of their inability to protect themselves from the repositories of power and their agents.

Additionally, despite their hopefulness and sense of fellow feeling, which sometimes encourages them to protest in different ways in the novel, their tragedy stems from a weak organisational base that is easily overridden by the power mongers and their agents. The seriousness and depth with which Nwosu engages the planners of the city and the way he shows their culpability in perpetuating poverty and slum dwelling in the city further expose the lack of transparency that characterises the power structure in New Maroko. For instance, the absence of adequate and proper planning on the part of the government is responsible for the risky siting of an incinerator in a residential settlement. If Maroko is a microcosm of Lagos, then Nwosu shows the lack of transparency that marks the power structure in the city just as he laments the powerlessness of the residents, who ought to 'do something about it.'

Apart from the failure of the government to address the challenges facing residents of slum settlements in Lagos, a careful examination of characters in the novel reveals the culpability of such residents themselves in perpetuating their neglect by the government. As it plays out in *Invisible Chapters*, the poor tend to compound their problems. For example, they sometimes pursue personal gains at the expense of the common good during crises. Nwosu illustrates this unfortunate situation through the characters of Centigrade, who is a quack doctor, and Ray, who is a religious charlatan. When an epidemic

breaks out in New Maroko, Centigrade uses the opportunity of the disease outbreak to supply fake drugs to fellow residents. He symbolises the war dogs who latch on to the ills plaguing those around to peddle fake news while extorting people and inflating the prices of drugs, thereby leading to the stigmatisation of those with the disease.

This situation was not uncommon at some point during the coronavirus pandemic. The lesson is that citizens of all ages tend to be vulnerable and impressionable in much the same or similar ways. On his part, Ray quickly opens a church to extort desperate residents seeking a spiritual solution. There is also enough evidence to suggest that, although governmental effort at improving the lot of the residents is inchoate, the residents regularly sabotage government facilities and set-ups, thereby giving room to local war dogs who cash in on crises to fill their pockets and cause more damage to the people and environment.

Additionally, honest and well-meaning members of the settlement do not show enough commitment to improving their living conditions. For example, Prinzi is a jolly good fellow and interesting to interact with. He is charming, friendly, brotherly, accommodating, intelligent, humorous, social, understanding, bold, courageous, and brave. However, he is also frivolous and seems to lack the focus and determination expected of a serious-minded person. Perhaps Prinzi's worst character traits appear to be his lack of a strong will and organisational ability. He is incapable of turning dreams into reality. Prinzi is a self-styled name, which he gave himself because he fancies himself as "a prince of hearts" (8). Prinzi is essentially a mere dreamer, an idealist who lacks the will of a doer. Apart from leading the pack of drifters in *Invisible Chapters*, Prinzi does not achieve anything tangible throughout the novel other than speaking 'big grammar.' He is unable to translate his much-flaunted knowledge into concrete action that can improve the condition of his fellow slum dwellers in Maroko, even though he is highly revered and frequently consulted for succour by the people. Prinzi's weakness and incapacity are better exemplified by the failure that dominates his personal life, thus resulting in his inability to realise his ambitions. He announces his intention to write "the great Nigerian novel" very early in the story, and when asked for his reason for siting his café in Maroko, he replies that Maroko provides him with the most ideal environment for his writing ambition, stressing that "there must be something about the slum that draws the artist" (9). He appears quite believable at this stage in the novel. However, at the end of the story, during Ashikodi's wedding, which gives Prinzi the opportunity to present the 'novel' he has spent his entire life trying to put together, there is only one copy. What surprises the reader is that "apart from the cover page, the content is made up of two hundred blank pages" (223).

Thus, Prinzi spends the entire lifespan of the novel talking about, rather than writing, the highly anticipated novel. There is a sense in which Prinzi's failure at writing a novel, which he makes so much noise about, sums up the failure of his entire life. He is a drifter who proves incapable of using his intellect to benefit himself, let alone society. To his credit, however, he succeeds in organising a handful of protests with his friend, Ashikodi, even though the protests do not produce the desired changes. It is not surprising, therefore, that nothing changes in Prinzi's life throughout the novel. It is little wonder that his café serves merely as a rallying point for his fellow slum dwellers to converge, talk, and purportedly formulate strategies on how to confront the powers that be in the city and liberate themselves from the excesses of the power mongers; of course, they ended up achieving nothing. Nevertheless, they make strong moves to protest, in the sense that they organise and fund the rallies themselves. This situation is similar to the recent youth protests in Nigeria, where young people self-funded the nationwide protests against police brutality. The point here is that Prinzi and his comrades in New Maroko can do much more. Prinzi appears to be intelligent enough to know that he and his fellow slum dwellers are being taken for a ride by the 'high and mighty' in the city, who donate cows to them for communal rituals and public ceremonies; however, he cannot stop the swindle in spite of his overwhelming knowledge. The unchanging attitude of Prinzi, even after his incarceration—particularly his failure to alter the pattern of his personal life by taking far-reaching decisions and following them up with action—can be interpreted as representative of the unchanging ways of power in the city. Prinzi's incapacity to write "the great Nigerian Novel," in spite of his intellectual ability and what seems to be his sincerity of purpose, symbolises the powerlessness of the urban poor in altering their situation. Their inability to help themselves can also be attributed to poverty and a lack of access to facilities. Their perennial state of lack seems to limit the characters from realising their personal and collective goals.

Perhaps Ashikodi is a deeper character than Prinzi in *Invisible Chapters* but he also fails to transform his dreams and visions about Maroko residents into reality. With his level of education, and especially going by the sense of purpose and commitment with which he relentlessly seeks after and finally secures Segilola's love, Ashikodi might have been able to bring about a significant level of improvement in the lives of Maroko residents if he had deployed all his craft to the struggle. Unfortunately, however, he chooses to confine himself to the realm of rhetoric, dazzling and mesmerising his audience with good oratory and scintillating stage performances, all of which amount to nothing in the end. Even more disappointing is his disappearance for a good three weeks when he senses that the heat is on the slum dwellers. During this period, he ensures that not even Segilola can explain his whereabouts. The

significance of Ashikodi's character, therefore, consists of his inability to cause any change in the living conditions of his compatriots. Ashikodi is, therefore, also a mere drifter. There is a sense in which the educational gap among the slum dwellers signifies nothing since all the characters are bound by mental ennui and disillusionment.

Policy Recommendations

Need to Provide Critical Medical and Adequate Housing Facilities

In Maik Nwosu's *Invisible Chapters*, an epidemic ravages the fictional Maroko, leaving some inhabitants dead and others sick. The cause of the epidemic is not stated in the story, although some characters suggest it is HIV/AIDS considering that the first death occurs at the Bonus Club. Irrespective of whether the disease is sexual or environmental, it is evident in the story that government intervention is absent. The government appears to be constantly detached from and unconcerned about the health needs of the people in the slum settlement of Maroko, taking its lack of concern as far as allowing incinerators to be placed in proximity to residential spaces. This fictional scenario manifests in practical terms in the ongoing COVID-19 pandemic, with so many Nigerians living in homes where self-isolation is almost impossible and little attention paid to address this situation at a national scale. It is, therefore, recommended that governments at all levels should begin to plan to provide necessary medical and structural facilities to reduce the impact of pandemics when they occur.

Sustainability of Public Communication Efforts

Going by the communal nature of the fictional Maroko, the residents find it easy to communicate with one another. Thus, the characters protect themselves against the disease by wearing handkerchiefs and avoiding contact with infected persons. Segilola, the manager of The Bonus Club, also makes moves to close down the club until the epidemic ends. Using Maroko as a microcosm of Lagos State and Nigeria generally, we observe that communication is very important to reduce the negative effects of disease outbreaks. Radio shows, TV jingles, billboard advertisements, social media publicity, and word of mouth go a long way towards curbing the effects of the COVID-19 pandemic. The Lagos State government has done a commendable job in this regard, as it has helped curb the spread of the pandemic in the state. The recommendation here is the sustainability of such governmental efforts.

Provision, Safe Use and Maintenance of Sanitary Amenities

Public health agencies should support and regularly advocate the adoption of clean environmental practices by all residents across all neighbourhoods to prevent and reduce the spread of infectious diseases. In *Invisible Chapters*, the

government fails in this regard. Instead, it erects incinerators in living quarters and dismisses its workers, who protest the presence of the incinerators by boycotting work. In this regard, it is recommended that in addition to providing things such as a hand-washing centre, hand sanitisers and face masks, the government should ensure the effective use and maintenance of these materials to reduce the spread of the pandemic. The government should also listen to and take appropriate action on genuine complaints by residents, regardless of their social class.

Preparation of Vulnerability Mappings by Town Planners

Slum communities, as evident in Nwosu's fictional Maroko, are more susceptible to infectious diseases than residents of privileged housing facilities. Since overcrowding and cramping are key features of low-income multi-tenanted housing, more serious efforts should be made by the government to improve the state of facilities in such accommodations. At present, more government efforts seem to be focused on elitist neighbourhoods where self-isolation is the norm and essential amenities are available, thereby shutting out residents of slum settlements. This situation makes it difficult for residents of slum settlements to observe COVID-19 safety measures. As will be shown in Chapter 6 of this volume, there is an inadequacy of isolation centres, face masks, disinfectants and other essentials for such residents. It is, therefore, recommended that town planners and developers should regularly conduct vulnerability mappings, i.e., the planning and selection of communities that would be more susceptible to disease outbreaks than others. This way, the government would be able to focus attention on these areas and thereby reduce the surge of the COVID-19 pandemic in multi-tenanted housing.

Engagement of Community Leaders toward Enlightening Citizens on Infectious Disease Prevention and Management

In *Invisible Chapters*, governmental action occurs only in the context of the demolition of fictional Maroko. The government promptly becomes unavailable when it comes to relocating the evictees to New Maroko or Queenstown. Consequently, the characters take the law into their own hands by relocating themselves haphazardly. However, it is significant that Prinzi, Ashikodi, and a few other characters are able to organise protests and ensure that the community gets what it deserves. They also organise work boycotts to protest against the incinerator. The leadership at the community level demonstrates its effectiveness by providing medical personnel and materials when the epidemic breaks out. Segilola, the manager of The Bonus Club, takes action to curb the spread of the epidemic when the government fails to act. She organises the girls in the club and persuades the women protesting against police injustice to strip themselves. Similarly, Alhaja Omowunmi uses her

political influence to lead the people in protests against government injustice. Given the example of Mama Badejo, a strong case is made in the novel for women to act as influencers and powerful agents of change in society, since governance should not be left to the government alone. Religious institutions are also a powerful force in terms of community participation and adherence to COVID-19 safety measures, as people tend to pay more attention to the directives of their religious leaders. For instance, in *Invisible Chapters*, Pastor David is a good example of the important role of religious leaders. It is, therefore, recommended that the government consider engaging more with community leaders in the drive towards enlightening the citizens on infectious disease prevention and management.

Curtailing the Activities of Unscrupulous People

There is no doubt that the pandemic has had a direct socio-economic impact on residents of multi-tenanted settlements. If the government fails to assist residents of poor housing facilities, such people will find ingenious ways of making the proverbial ends meet. In the process, commodity prices will be arbitrarily hiked by traders who are determined to take undue advantage of the pandemic. During the infectious disease outbreak in *Invisible Chapters*, characters are seen exploiting the situation to their economic advantage by trading medical and spiritual 'solutions' in exchange for money. This experience was enacted in the recent COVID-19 situation in Nigeria. The stay-at-home directive by the government resulted in a shortage of income, and life became unbearable for many residents of multi-tenanted settlements. It is, therefore, recommended that the government devise effective mechanisms for curtailing the activities of unscrupulous people seeking to take undue advantage of the pandemic to make undeserved personal gains. Such measures will encourage Lagos residents to adhere to government directives on curbing the pandemic.

Conclusion

Invisible Chapters exposes the possibilities existing in multi-tenanted settlements: possibilities of friendship, communal living, genuine love, sincere affection, dignity, and, most importantly, how to manage situations such as the outbreak of an infectious disease. The Maroko phenomenon teaches that it is possible to reduce, if not totally eliminate, loneliness and anonymity from city life and to foster communal living, which is believed to typify life in the countryside. Indeed, how poverty, disease, distress, lack, anguish, and hopelessness would not be the factors uniting a cross-section of the inhabitants of the city seems to be Nwosu's concern in the novel.

In conclusion, although *Invisible Chapters* presents residents of multi-tenanted settlements as government rejects who have been obliterated from the government's map even in situations such as the outbreak of a pandemic, the writer nonetheless points at the way forward. Nwosu suggests that the power of the poor lies in their capacity to stand up to the tyrant that appears to be holding them back. He situates this power in the hands of Ashikodi and Haile— who are later drawn towards the echelons of power—as well as Razaki, Idi, Prinzi, and Segilola, (the only virgin to be found in a brothel). Together, they form a powerful force against the insensitive government and are able to effectively manage an infectious disease that breaks out in their decrepit neighbourhood.

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Chapter 6

ADVOCACY AND COMMUNICATION STRATEGIES FOR THE MANAGEMENT OF INFECTIOUS DISEASES IN LOW-INCOME COMMUNITIES

Basirat Oyalowo, Taibat Lawanson and Timothy Nubi

Abstract
Households in disadvantaged communities tend to be the most vulnerable to infectious diseases, since their homes often typify the diverse range of problems associated with overcrowding and shared basic sanitation facilities. The COVID-19 pandemic has shown the extent of these challenges as well as the underlying issues of inequality that underpin the distribution of urban facilities and services. Thus, the major objective of this chapter is to ascertain and communicate coping strategies for advocacy and enhanced COVID-19 management in Lagos. The central questions the chapter addresses include: (i) What are the coping strategies that residents of multi-tenanted housing in Lagos can adopt in order to achieve greater protection against a pandemic? (ii) How can these be communicated to similar communities? The study is based on the normative lens of social justice, using a mixed-methods approach which includes an online survey, a social media survey, virtual focus group discussions, and interactive radio call-in programmes. It is found that immediate policy actions are needed to improve housing conditions, increase access to water and sanitation, incorporate community engagement in public health messaging, foster stronger local governance, and enhance neighbourhood-based infectious disease surveillance and response systems. It is argued that spatial injustice limited the acceptance of government's messaging during the lock down periods. Working closely with target communities while ensuring effective mechanisms for accountability and transparency in the distribution of public infrastructure and services is a considered panacea.

Keywords: COVID-19, Infectious diseases, Interactive Radio, State-Society, Spatial Justice

INTRODUCTION

The COVID-19 pandemic is a uniquely urban one, and it has had a profound impact on the way we access city functionality, especially in terms of health, transportation, commerce, entertainment, and industry. The propensity for density is a constant feature of the city, and, for most urban dwellers, the requirement of physical distancing was difficult to accept. For African cities, households in slum communities tend to be the most vulnerable to infectious diseases since their homes frequently typify the diverse range of problems associated with overcrowding, shared toilet and washing facilities, as well as lack of access to clean and safe water supply.

In 2017, the World Health Organisation estimated that, globally, 844 million people lack access to safe and clean drinking water, that 4.5 billion people do not have toilets at home, that 600 million people share a toilet or latrine with other households, and that only 14% of people in sub-Saharan Africa have hand-washing facilities with soap and water at home (World Health Organisation, 2017). The emergence of the COVID-19 pandemic worsened these problems. Public health messages on COVID-19 management based on non-pharmaceutical interventions recommended by the World Health Organisation were lost on over 26 million residents of Lagos (Lagos State Government, 2020). Their housing conditions limited their ability to adhere to various preventive actions such as hand washing, use of sanitisers, keeping safe at home, and adhering to social distancing guidelines (World Health Organisation, 2020).

As part of a larger body of multidisciplinary research on COVID-19 adaptation strategies of residents of multifamily homes, the research on which this chapter is based was motivated by concern about the capacity of residents of multi-tenanted housing to adhere to health instructions in severely overcrowded neighbourhoods lacking basic amenities. The specific objective of this chapter is to ascertain and communicate coping strategies that can be adopted as advocacy for enhanced COVID-19 management by residents of multi-tenanted housing in Lagos. Thus, the central questions it addresses are as follows: (i) What are the coping strategies that residents of multi-tenanted housing in Lagos can adopt in order to achieve greater protection against the pandemic? (ii) How can these be communicated to residents of similar communities?

The study adopted a mixed-methods approach involving the use of online surveys, social media surveys and analytics, virtual focus group discussions, telephone interviews and radio call-ins. Prior to data collection, a systematic

literature review was done to critically examine the material on the coping strategies of residents of multi-tenanted housing.

In the sections that follow this introduction, a literature review that provides alternative theoretical approaches and a conceptual framework for the study is presented, followed by a contextualisation of housing as the primary point of non-pharmaceutical management of COVID-19. Here, we show the limits of inadequate housing in performing this function in the city of Lagos. In Section 4, we describe the methodology and various sources of data, as well as the key findings from each data collection method, while in Section 5, we provide an analysis of the findings, drawing freely from Social Justice Theory, which forms the theoretical basis of the work. Policy recommendations are presented, drawing on the gaps identified and the suggestions for change collected from the study participants. Section 6 concludes with an emphasis on the fact that the management of infectious diseases requires decent housing conditions as well as rapid detection and response systems, the costs of which need not be borne by the government alone. It is also noted that such interventions can be made more effective by working closely with target communities and ensuring mechanisms for accountability and transparency in the distribution of public infrastructure and services.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Since the first case of COVID-19 was recorded in the country in February 2020, several academic and non-academic works have emerged to observe, evidence, inform, and even disprove the nature and impact of COVID-19 from various philosophical and disciplinary perspectives. Due to these multiple directions, the theoretical underpinnings of COVID-19 studies are also quite varied. In addition, global organisations such as the World Health Organisation (WHO), the International Fund for Agricultural Development (IFAD), and the Food and Agriculture Organisation (FAO) have jointly identified impacts along the lines of the healthcare system, food systems and the world of work (World Health Organisation, 2020b). On its part, UN-Habitat has identified the impact on city systems, given that cities were the epicentre of the pandemic and remain the critical crucible for addressing it (UN-Habitat, 2020), while the UN Department of Economic and Social Affairs (2020) has remained concerned about the economic and social impacts of COVID-19 on all, especially people already made vulnerable by disability, gender and age, and continues to work towards supporting more inclusive social policies to guide its management.

Thus, attempts to understand the impact of COVID-19—and then to adapt to it—would require an engagement with the sustainable development tripod, i.e.,

the social, the economic and the environmental. It is therefore possible to co-locate COVID-19's impact and adaptation within the ambit of sustainable development, with a view to drawing the study's conceptual framework from there.

In addition, a number of theoretical frames in urban studies have guided this chapter's contribution and influenced its conceptual framework. With its focus on multifamily homes that are located in informal communities, the development and planning implications of the data collected can be analysed through a normative lens such as the concept of 'spatial justice'. Spatial justice involves the fair and equitable distribution, in space, of socially valued resources and the opportunities to use them (Soja, 2009). By implication, it seeks the correction of injustices suffered by people on the basis of locational discrimination. In developing an understanding of COVID-19 policies in relation to residents of multifamily homes, a social justice perspective enables deep interrogation of whether policies have favoured the less privileged in the informal communities. As Rigon (2021) points out, one manifestation of inequality might be the lack of hospitals in these neighbourhoods, limiting access to rapid-response healthcare during infectious disease outbreaks and thereby increasing vulnerability to widespread infection. Literature on COVID-19 has already emerged in this area, with studies examining the perpetration of health inequalities in government policies (Okoi and Bwawa, 2020), how layers of inequality in infrastructure provision compromise intended policy outcomes (Ekumah et al., 2020), the outcomes of rushed policies (Amzat et al., 2020), the mismatch between policy and reality (Senghore et al., 2020), and the general impracticability of popular health advice in communities housing already vulnerable and disenfranchised people, such as those in refugee camps (Raju and Karlsson, 2020).

An engagement with 'neighbourhood effect' studies provides another (but related) pathway to understanding the adequacy of COVID-19 policies in informal communities. Neighbourhood effect studies are founded on the hypothesis that there is an impact of place on people's character and behaviour that goes beyond what is expected from individual and family characteristics (Holland et al., 2010). This means that living in certain neighbourhoods impacts both the behaviour and characteristics of people (Oyalowo et al., 2020). By engaging with the neighbourhood effect hypothesis, it becomes possible to ascertain how continuous vulnerability to infectious diseases has shaped adaptation to COVID-19 for residents of multifamily homes and their immediate neighbourhoods. This is important for the study, given that Lagos has been exposed to infectious disease outbreaks such as Lassa fever, cholera and Ebola fever in the last decade, as well as the bubonic plague decades

earlier—all of which have been recorded to be prevalent in slums and informal housing clusters (Lagos State Government, 2020). This situation has major consequences for policy responses in deprived neighbourhoods (van Ham et al., 2013) and highlights Buckley's (2020) framing of informal settlements as comprising people 'deserving of help by virtue of their location'. Again, exploring how policy interventions resonate with people who have developed a culture of survival through self-help at the time of the pandemic provides an avenue to understand the city on the neighbourhood scale, with a view to better targeting interventions in them while learning from their lived experiences.

At the nexus between spatial injustice and neighbourhood effects lies the quality of state-society relations, which in this study is to be interrogated by examining the residents' reactions to the government's health messages. State-society relations enable research into the issues of governance and trust as a long-term process that takes several decades to cultivate. Without trust established between the government, political leaders, and citizens, the latter turn to other alternatives (within themselves) or other institutions (external: civil society groups), and the outcomes may either conflict with or complement the government's interventions. This is the motivation for Buonsenso et al. (2020), for instance, in investigating the social consequences of the COVID-19 lockdown in low-income settlements in Sierra Leone; for Corburn et al. (2020), who discouraged the adoption of top-down strategies in checking the spread of infectious diseases; and for Wilkinson (2020), who stressed the need for local knowledge in policymaking and setting realistic rules and regulations that can be relevant to the situation of informal communities.

Thus, the conceptual framework of this study emerged as shown in figure 1.

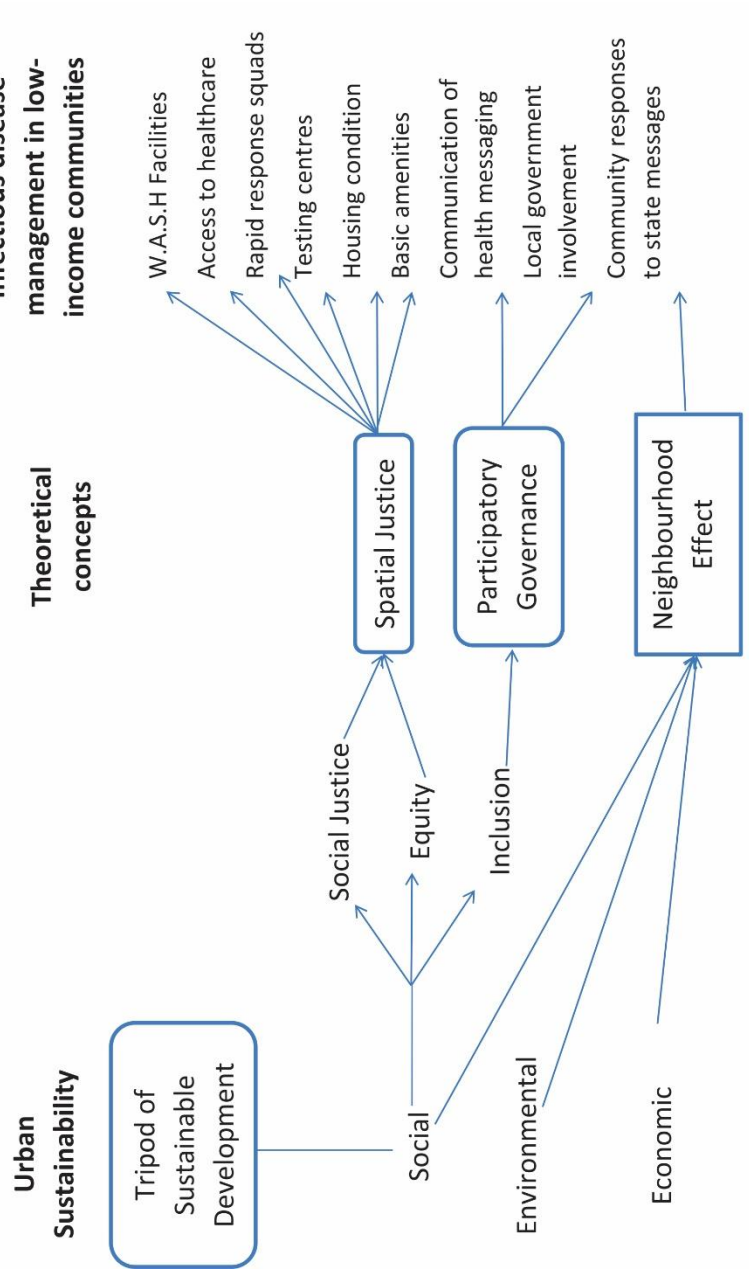

Figure 1: Conceptual Framework for the Study

Given the above framework, in answering the research question of how residents of multi-tenanted housing in low-income neighbourhoods can be better supported during infectious disease outbreaks, we identified accessibility to healthcare and accessibility to basic facilities in the home as variables from the theory of social justice. We also identified community responses as a variable from the neighbourhood effect theory, which is seen as a measure of state-community relations.

There were various methods for testing these variables, including the use of online surveys and virtual focus group discussions that created avenues for learning directly from members of the local communities. The lessons from such interactions were then incorporated into COVID-19 healthcare messages, which were subsequently communicated to a wider network of communities, specifically those in the hotspot(s) of the pandemic within Lagos, as designated by the Lagos State Government. This is done in fulfilment of the second objective of the study, which was to establish how adaptation strategies can be communicated to multi-tenanted households in low-income communities.

RESEARCH CONTEXT

Sustainable Development Goal 11.1 targets access to adequate, safe and affordable housing, basic services, and slum upgrading, thus connecting housing to good health, well-being and economic development. Lagos State alone is believed to account for about 5 million (38%) of the national housing deficit of approximately 18 million in Nigeria. Of this figure, the Lagos State Government estimates the qualitative housing deficiency, which measures housing inadequacy, to be three million units, as evidenced in the city's over 100 slum settlements, where 70% of the population resides. This means that their homes lack basic facilities such as potable water, toilets, baths and kitchens. By implication, the city lags far behind in achieving SDG 6.1 on access to equitable water supply, hygiene and sanitation. Thus, the Lagos State Government has been striving to address the attendant environmental health consequences of poor housing facilities, such as open defecation, stagnant water, disease outbreaks and lack of public hygiene amongst others.

It was against this backdrop that the COVID-19 pandemic had to be managed, especially as the possibility of community spread placed residents of these housing types and their communities in a vulnerable position. On its part, the World Health Organisation (2020) promoted non-pharmaceutical interventions (NPIs) as key strategies to fight and manage infectious diseases. If significant impact is to be made, NPI requires robust health measures that are often carried out within the homestead. Thus, as Oyalowo (2020) points out, the home becomes the first healthcare station/responder in COVID-19 and other

infectious disease outbreak situations. During the lockdowns, people were encouraged to stay at home in order to reduce the risk of infection, as well as to self-isolate as a means of containing confirmed cases and reducing spread by asymptomatic carriers. In addition, mild cases of COVID-19 were managed at home to reduce pressure on hospitals. In this case, affected family members were required to be confined to single rooms not shared by any other family members. Finally, home was the ideal place for recovery after being treated at the hospital.

However, a large number of people actually live in homes where such public health advice could not be heeded. For example, the common design for multi-tenanted housing in cities such as Lagos is Brazilian-style architecture, which provides a long corridor with rooms on both sides facing it. Designed as a 'room and parlour' with over 10 other families in some instances sharing the same kitchen, toilet, and bathroom, such structures hinder residents' ability to adapt to the recommended safety measures (Oyalowo, 2020). Nevertheless, as the neighbourhood effect theory implies, residents have managed to create avenues for adapting to these requirements based on earlier experiences with infectious disease outbreaks. It is important to document these approaches by learning from the people and extending the lessons to other communities where access to this information have become urgent. This is the focus of the data collected, analysed and disseminated for this chapter.

RESEARCH DESIGN

As shown in Table 1, we adopted a mixed-methods approach involving qualitative and quantitative approaches. A concurrent strategy involving the gathering of different data from various sources was adopted. Online surveys and Twitter social media analytics were used for quantitative data collection, while radio call-in programmes, virtual Focus Group Discussions (FGDs), and virtual in-depth interviews with professionals, Non-Governmental Organisations (NGOs), community leaders, and government were used for qualitative data collection.

Table 1: Research Design

Quantitative	Data Collection Methods	Data Collection Instrument	Sample Size of Respondents
	Online Survey	Google form shared on Twitter, Facebook, WhatsApp Link to Survey: https://forms.gle/UUTEfVf7F7wm9Rr97	2,747 Respondents
	Social Media Survey	Poll 1 on Twitter Link to Poll: https://twitter.com/LarhwallY/status/1327627480925147138?s=20	584 votes
		Poll 2 on Twitter Link to Poll: https://twitter.com/LarhwallY/status/1327629792561291265?s=20	715 votes
Qualitative	Virtual Focus Group Discussion	Interview Guide	12 Participants
	Radio Call-In Programmes	Programme Interview Guide Women FM (91.7): English Programme	21 Respondents

Data Collection

Online Survey: The online survey was developed using Google Forms and shared widely across social media handles and WhatsApp groups. The survey contained a total of 47 questions with a focus on the perception of safety at home, measures for keeping safe at home, community preparedness, recommendations for communities, and government intervention to promote effective public health measures. The survey was circulated between October 10, 2020, and January 12, 2021, garnering responses from across 27 local council development areas (LCDAs) in Lagos, as captured in Figure 2. Analysis was carried out using descriptive analysis based on cross-tabulations.

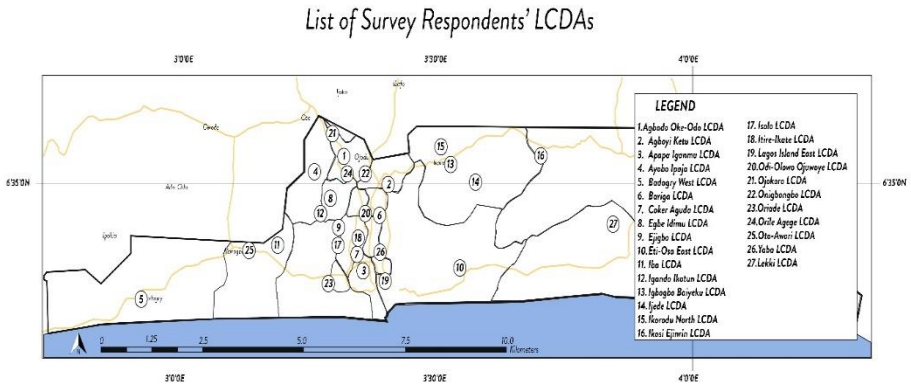

Figure 2: List of LCDAs covered in the online survey

Social Media Survey: The social media survey was conducted on Twitter, where polls were constructed to collect information on housing structure, the adequacy of houses for physical distancing, and the role of music during the lockdown (see Nweke's contribution, chapter 3 in this volume). In this chapter, we focus on the adequacy of housing for physical and social distancing, which got a total of 715 votes.

Focus Group Discussion: A virtual focus group discussion session took place on December 16, 2020; it involved 12 residents drawn from six low-income communities in Lagos State. Participants explained how members of their communities—who are mainly low-income earners—were coping with the pandemic; they also highlighted local actions for staying safe from the pandemic. This forum provided an in-depth understanding of the local responses to government-designed messages that were key to understanding state-society relations while also providing an intense local learning opportunity to assess how much people had learned from their previous experiences with infectious disease outbreaks.

Radio Call-Ins: Radio call-in programmes were conducted over a period of three weeks. The call-ins were done in five languages: English, Yoruba, Igbo, Hausa, and Pidgin, on three radio stations, Women FM 91.7, Bond FM (92.9 FM) and Radio One (103.5 FM). Each programme was scheduled as a 15-minute episode which attracted at most, seven callers each. The call-ins provided insight into how residents of multi-tenanted housing had coped with infectious disease outbreaks in the past and how they were coping with the COVID-19 pandemic.

KEY FINDINGS

Findings from Online Survey

WASH adequacy on the home front: One of the major motivations for this study is the widely acknowledged inadequacy of the sanitary facilities available to residents of multifamily homes. Respondents were requested to provide some data on how adequate their toilet, bathroom and kitchen conditions were, especially with regard to sharing. The variable of access to water was also ascertained. With regard to sharing toilets/bathrooms, nearly 1 in 4 (24 per cent) claimed they shared toilets/bathrooms with three or fewer families, 22 per cent shared with between 4 and 6 families, 46 per cent shared with between 7 and 12 families, and 7 per cent shared with more than 12 families. The number of toilets was also specified. Nearly 3 in 10 people (29 per cent) reported that they have at most two bathrooms/toilets in their building, while the majority (57 per cent) said they have between 4 and 6 bathrooms/toilets and 15 per cent claimed they have more than six. Kitchen facilities are also shared, with 29 per cent claiming they share a kitchen with at most three families, 27 per cent with between 4 and 6 families, and 45 per cent with seven or more families. For a basic amenity such as water, the predominant source of drinking water was the purchase of 'pure' water (sachet water).

Coping strategies of residents: Respondents explained how they were able to cope with the pandemic by not receiving visitors, engaging in indoor relaxation activities, seeking information, avoiding large gatherings, practicing spiritual, herbal concoctions, working online, and engaging in online learning —from the lockdowns to preventive measures against COVID-19 in their households and day-to-day lives. They reported a variety of practices, including the use of face masks, face shields, nose masks, hand gloves, and alcohol-based hand sanitisers; an increase in the use of ginger, garlic and other herbs, regular hand washing, exercising, not touching the face, dietary changes and social distancing. Some offered additional strategies:

> *"We tried, especially in the area of not allowing visitors." (Respondent 62/Female/ Lekki Local Council Development Area)*
>
> *"Engagement in sporting and extracurricular activities including listening to music and seeing movies." (Respondent 56/Male/ Outside Lagos)*
>
> *"Support from friends." (Respondent 53/Female/Onigbongbo Local Council Development Area)*
>
> *"Prayer, music and information from multimedia." (Respondent 45/Male/Isolo Local Council Development Area)*

"Dependence on God; avoiding large gatherings." (Respondent 13/Female/Itire-Ikate Local Council Development Area)
"It was by God's grace. Cut expenses, bought more of food items than any form of expenses." (Respondent 40/Male/ Outside Lagos)
"I engaged in productive activities and had enough time to reach out to friends and family members via social media" (Respondent 4/Male)
"Working online." (Respondent 47/Male/ Lekki Local Council Development Area)

Perception of safety at home: In view of the centrality of housing to infectious disease management, respondents were asked their opinion on the adequacy of their homes to safeguard them against COVID-19. Already, the preponderance of sharing sanitation and kitchen facilities has been noted. Respondents believed that sharing toilet, bathroom and kitchen facilities increases the chances of infection and that living in multi-tenanted housing increases their risk of infection. Some considered COVID-19 a 'rich man's illness,' while others called it a scam, for which, they said, there was no need for all the restrictions on social life.

Table 2: Perception of COVID-19

Perception statements	Frequency	Per cent
COVID-19 is real	1441	5.8
COVID-19 feels close to me	1317	5.3
COVID-19 feels far away from me	1305	5.3
Sharing toilets increases my risk of infection	1305	5.3
COVID-19 is spreading slowly	1356	5.5
COVID-19 is a scam	1255	5.1
Sharing kitchen increases my risk of infection	1263	5.1
COVID-19 period is now over	1283	5.2
COVID-19 is spreading fast	1331	5.4
Sharing bathrooms increases my risk of infection	1319	5.3
COVID-19 is something I should constantly think of	1261	5.1
COVID-19 is something I shouldn't think of	1316	5.3
COVID-19 is fear-inducing	1265	5.1
Living in a multi-tenanted housing increases my risk of infection	1304	5.3
COVID-19 is a rich man's illness	1311	5.3
COVID-19 is brought by rich people into Nigeria	1316	5.3
My neighbours can infect me	1298	5.2

COVID-19 can be spread by children	1262	5.1
COVID-19 restrictions should be lifted (e.g. use of face masks, public transportation measures, closure of some businesses, etc.)	1322	5.3
Total	**24830**	**100.0**

Community preparedness: Respondents were asked about their perception of community preparedness for COVID-19 management. Results showed that 33 percent of the community had plans or programmes for COVID-19 preparedness, and that the plans included the purchase of infrared thermometers and sanitizers, securing of palliative packages, conduct of regular environmental sanitation, distribution of face masks, as well as continuous public awareness and sensitisation on preventive measures. All of these measures were said to have been undertaken at the community level.

Advice for fellow residents: Residents were asked to advise other communities with similar housing adequacy issues on how to protect themselves against the COVID-19 infection. They encouraged other residents to observe strict adherence to the COVID-19 protocol specified by the National Centre for Disease Control (NCDC). They also suggested that fellow community members should observe safety measures even if in doubt.

"*Everybody should protect themselves by maintaining good hygiene; washing of hands…. Whether (COVID 19 is a) scam or real* ***(resp No 42/Female/ Yaba Local Council Development Area).”***

Other advice included urging them to listen to music or adopt other measures to avoid emotional and psychological breakdown, maintaining a positive mindset towards life, drinking hot water mixed with ginger and or garlic at least three times a week, and undertaking thorough environmental sanitisation.

Advice to government: Residents were encouraged to express their views to the government on how the COVID-19 pandemic could be better managed. This question was asked to provide an avenue for learning from the people and ensuring inclusive policymaking in infectious disease management in low-income communities. On this, respondents stressed the need for the government to continue sensitising people in their communities. They also advised the government to provide palliatives to community members. For example, Respondent No. 8 **(a male)** observed that:

> *To provide enough food and cash (palliatives) to the people by going from house to house to share it, not to ask people to queue under the sun when they were asked to keep social distance.*

They further urged the government to lead by example in terms of observing the COVID-19 protocol and enforcing it. There was also the advice that the government should provide people with masks, hand sanitisers and other safety materials, in addition to providing more testing centres within their communities.

Moreover, respondents advised the government on the need to undertake relevant research and ensure that planning laws are enforced. There was also the suggestion that the government should engage in a social awareness campaign on the need for personal hygiene. Most respondents advised that basic amenities like water and electricity be provided: "*Provide clean water and a clean environment by keeping our drains clean, … and provide affordable health care services."* (Respondent No. 10/**Female/ Oriade Local Council Development Area)** Finally, they offered advice on the provision of adequate infectious disease surveillance as well as fully equipped health centres in communities.

Findings from the Social Media Survey

Twitter users were asked to vote on how adequate their housing was in relation to the management of COVID-19 and other infectious diseases. They had three options 'not adequate', 'adequate' and 'very adequate'. The 'not adequate' option polled 38%, the 'adequate' option polled 36%, and the 'very adequate' option posted 26% of the votes. The social media survey helped to provide a wider sample for the research. Discounting those who live in housing considered 'very adequate' (possibly due to income type and household size), almost the same proportion of respondents claimed to have adequate and inadequate homes, with the latter slightly more at 38%. However, in absolute terms, this means that 38% of the respondents are more vulnerable to infection due to housing inadequacy—and this is worrisome in the fight against the community spread of COVID-19 and other infectious diseases.

Findings from the virtual focus group discussion

Housing inadequacy was generally cited in relation to access to indoor water supplies, with all respondents agreeing that water poverty was more pronounced in the absence of potable water supplies. It was found that occupancy density depended largely on housing location. Respondents from Ikorodu (a rapidly urbanising local government) maintained that they had adequate spaces despite the slum conditions of their environment, while

participants from Makoko (a riverine informal settlement) complained about space constraints. There was a consensus that toilet facilities were inadequate across all communities and that social distancing in their home setting was impractical:

> *'We don't have space in housing and opportunity of not sharing toilet and this is a major problem, no matter how we wash our hands and social distance among others we have the above as one of the great challenges we are facing.'* (**FGD participant No. 1/male/Irede community**)

> '*It is not possible for those of us who are living with co-tenants who have maybe 4 or 5 children. I don't think there are ways to take the person out of danger'* (**FGD participant No. 4/female/Kirikiri town**).

In the face of the above-cited issues, participants were asked about the local practices that communities used to protect themselves against COVID-19. They cited consistent door-to-door campaigns by community leaders and literate youths, translations into local languages during campaigns, as well as the supply of free face masks and the provision of hand-wash stations around the community. However, there were reports of widespread doubt about the pandemic among some residents. For instance, some residents reported as follows:

> *'Some people don't believe that it exists—in fact, somebody just asked me now if I have been infected, and that if I have been infected* (that is, when), *I should be able to tell them that COVID is real.' **(FGD participant No. 6/female/Ikorodu-Ebute community**)*

> '*We had to organise a town crier who went round the community announcing all this for people to understand. We also had to follow up with people, particularly members of our federation in the community. We got a public address system; we moved around talking to people (**FGD participant No. 3** /**Male/Irede community**).*

> *'We always have meetings every Thursday on the COVID-19, so it was an opportunity for us to reach out to people'* (**FGD participant No. 2/Female/Ajegunle Ikorodu**).

Thus, practices and priorities differed from community to community.

Findings from radio call-in programmes

Callers asked whether they had ever experienced a disease outbreak in Lagos and what they could say about their perception of compliance with the public health advice on COVID-19. This study reports on the latter, with the responses mainly indicating the difficulty of maintaining physical distance.

'We really don't have space' - (**Caller 61/Male/Mowe community**).
'People are not practising social distancing because people don't believe in COVID. A lot of people are not taking it too seriously' – (**Caller 62/Female/Akowonjo community**).

However, there are records that government enlightenment visits helped bring about changes: *'They (government officials) came around once on enlightenment and sensitisation. Some people were doubting but took precautions after the enlightenment'* - (Respondent 64, who lived in Ketu, recalled. (Caller 64/Male/Ketu community).

Communicating findings to target communities

Public health advice on social distancing prevailing during the dissemination period influenced the choice and depth of communication to target communities. One approach to this was to use similar communication strategies as those adopted during the study. The following options were therefore selected:

(i) Jingles were written to reflect key messages such as discouraging visitors to the home while resounding the need to ensure that visitors adhere to public health advice on the use of face masks and hand sanitisers. The researchers adopted a co-production approach in which draft messages were sent to community partners for their input before production. This way, the team received guidance on language, tone, clarity of expression and other nuances that could impede understanding of the messages. Jingles were aired in English, Pidgin, Yoruba, Ibo, and Hausa, thus reflecting the major languages of residents in Lagos. Radio stations that had gender appeal (Women FM) and cross-cultural coverage (WAZOBIA FM) were chosen. A first jingle was prepared specifically for the December holiday period (24 December 2020 –10 January 2021), during which many residents would usually travel and attend social gatherings. Another jingle targeted the resumption of school, work and normal daily activities (10 March 2020 to 23 March 2021). The jingles were aired for a total of 75 days.

(ii) Community walks: In collaboration with community partners (the Nigerian Federation of Slum/Informal Communities Dwellers), the core messages from the project were displayed on banners that were shared across neighbourhoods in the local government areas identified by the Lagos State Government to be hotspots of COVID-19 infection in the state. Public address systems were used to relay the core messages on the streets of these neighbourhoods, alongside translations in the local languages. Figures 3 and 4 show this in progress in the neighbourhoods.

Figure 3: Community walk
Source: Fieldwork (2021)

Figure 4: Community walk
Source: Fieldwork (2021)

DISCUSSION AND POLICY RECOMMENDATIONS

Discussion

In setting out this study, our objective was to provide evidence-based support for people living in highly populated and mostly overcrowded homes in low-income communities for protection against COVID-19 infection. However, we also found strategies that would be useful in the management of other infectious diseases.

In the course of adopting and adapting methodologies to address these objectives, the researchers identified general issues concerning housing adequacy, with people acknowledging their vulnerability to COVID-19 and other infectious diseases owing to housing conditions. Confirmation for these findings came from residents of low-income areas through the focus group discussion and from Twitter users. No less than 38% of the Twitter users polled were able to attest to the inadequacy of their homes against COVID-19 infections. It is therefore clear that any course of action in infectious disease management must consider residents' housing conditions.

The nature of infectious diseases such as COVID-19 suggests that the contagion rate could be very high if there is an outbreak, especially if nothing is done to support people in addressing the sources of their vulnerability to infection in their own homes. Indeed, there are strong concerns that it is not possible to maintain social distancing in multifamily homes. Consequently, to overcome this severe constraint, some occupants of such housing have attempted to reduce the number of new entrants into their homes, such as guests and relatives from elsewhere. This was meant to help them avoid further congestion and the risk of infection while keeping within the government's COVID-19 management guidelines. There is a strong possibility that with proper communication targeted at this group, the initial resistance to COVID-19 can be managed. The study also found evidence that residents actually have a proper understanding of the severity of the pandemic and generally took serious measures to protect themselves, despite the dire circumstances of their living conditions.

Nevertheless, expectations linger in relation to government intervention, especially in the area of housing improvement and physical facilities. Facility deficiencies are most evident in accessing water supply. The dependency on purchased water for drinking cuts across the income classes, a situation that could lead to water rationing, which in turn can impede infectious disease care. As non-pharmaceutical management for COVID-19 is generally based on hand washing, families could be more vulnerable to infection if they lack access to

adequate amounts of water for this purpose. Access to affordable water supply has therefore become more urgent if the government is to significantly reduce the number of people lacking access to water for practicing sound hygiene (see World Health Organisation, 2017).

It was also found that residents looked up to the government for the provision of economic palliatives and food relief. Therefore, should infectious disease containment warrant a lockdown, there would be a need for equitable distribution of such palliatives (such as door-to-door sharing) and the distribution of free personal protective equipment against such diseases. In this regard, residents suggested the enforcement of planning laws with environmental imperatives and evidence-based policies.

There were also strong expectations about the role of government in providing adequate infrastructure and health services to people in all locations. Thus, for COVID-19 and other disease outbreaks, access to nearby testing centres, isolation wards and emergency treatments were clear expectations. In the meantime, people rely on common health practices such as drinking hot water mixed with ginger and or garlic, adhering to instructions on the use of face masks, and hand sanitisers and engaging in other precautionary actions, including undertaking community support and seeking healthcare in nearby public and private healthcare centres.

The opportunities for promoting spatial justice in the distribution of basic services are also quite apparent in this study. At COVID-19 testing centres at the local level, the provision of water, electricity, affordable healthcare, and free-flowing drainages are specific examples identified as the responsibility of public service providers. Of course, these require significant investments by the government, alongside their equitable distribution. If the provision of these health infrastructures is integrated within an infectious disease surveillance system, there would be an enhanced likelihood of spatial justice that would improve the quality of life for residents of multi-tenanted homes and low-income communities in general.

The second objective of this study was hinged on the communication of research findings to the study population. Our study confirms that the government's public health messaging is not always believed by people, as noted in previous studies (Ekumah et al., 2020; Okoi and Bwawa, 2020; Raju and Karlsson, 2020). The underlying factor is negative state-society relations, where citizens do not believe in the government and the government does not operate in an accountable fashion where welfare packages are distributed in a manner engendering trust. Evidence of this lack of trust was found in residents'

assertions that government officials should lead by example, especially by obeying the COVID-19 protocol when enforcing the guidelines. Some of the direct responses suggested the perception that COVID-19 is a government scam. In any case, stakeholder's expectations were that public health messages would be sustained with a closer connection to the people, especially in terms of door-to-door communication. Although there were reports that these strategies were associated more with community advocacy and nongovernmental organisations, many people refused to believe the messages and act on them. All the same, the study found that consistent, door-to-door campaigns by community leaders and literate youths, using the local languages, as well as free distribution of face masks and hand-wash stations, became the core of the protection campaign and the source of information to people in the more remote low-income communities. It is understandable that personnel shortage might limit the activities of the state in the provision of more personalised health messages, but it is also clear that the state does not have to do it alone. Participatory models of community engagement that will foster formal partnerships between the government and the people might therefore be an expedient course of action in infectious disease management.

This consideration influenced the dissemination of the findings of the study to the community, where multiple contact strategies were adopted. The use of popular radio stations to air targeted messaging at key points (the December holidays and school resumption in January) was one such approach that was targeted at entire households. The production of animated cartoons that were then shared on social media was another approach targeted at younger residents. There was also the community walk, which involved the use of public address systems mounted on vans for public health education targeting those working in the communities, especially women working from home. Local language considerations were also key to dissemination. It is envisaged that, given the diverse communication strategies available, the uptake of public health messaging will be enhanced as each group becomes more aware of adaptation strategies through the medium they understand and relate to better.

Policy Recommendations

The study shows that immediate policy actions are needed in four core areas: (i) housing conditions; (ii) access to water and sanitation; (iii) community engagement in public health messaging; and (iv) local government design and provision of neighbourhood-based infectious disease surveillance and response systems.

Investment in improving housing conditions: One of the major revelations of the COVID-19 pandemic was the realisation of the importance of the home

as a complete system of care. Deficiencies were observed in terms of past actions of the government in providing adequate housing, especially as reflected in the state of the city's numerous slums. Consequently, there is a need for immediate public funding and public-supported private-sector investment in the short term to address problems of affordable housing supply and the improvement of rundown homes. Such investment will help in securing decent sanitary facilities and supporting home improvement schemes.

Water and sanitation: Heavy dependence on purchased water is a risk factor, as it necessitates water rationing, often leading to inadequate water for hand washing and personal hygiene. Access to affordable water and sanitation must therefore be prioritised at the household and neighbourhood levels. Indeed, there is a need to set, prioritise and support decency standards for sanitation facilities in multi-tenanted/multifamily homes.

Participatory, community-engaged public health messaging: For more effective public health messages, the government should actively engage local community networks and associations that operate formally or informally. These measures are even more urgent given that issues regarding the efficacy of vaccines and their uptake are now being discussed in these communities**.**

The role of the local government: State governments should strengthen local governments' participation in areas such as community-based health monitoring and surveillance, PPE distribution centres, contact tracing and micro-level infectious disease response centres. This is increasingly vital in the current discourse on vaccination deployment and response in low-income communities.

CONCLUSION

The management of infectious diseases requires rapid detection and response systems. In a pandemic situation and given current deficiencies in housing conditions and community-based infrastructure, these needs become even more urgent. Consequently, in-situ regeneration, home improvement loan schemes, and private-sector-supported neighbourhood facilities are feasible alternatives for various community settings that could be deployed to address these problems. However, while improvements to housing conditions play a key role in protecting against infection and enhancing effective care in the home during lockdowns, this does not preclude the need for accessible and affordable healthcare facilities.

When the lack of healthcare facilities coincides with perceptions of injustices, communication of precautionary measures from the government is met with

disbelief. In this regard, spatial justice theories recognise the need for equitable distribution of critical social and economic infrastructures. Spatial justice itself is an expression of social sustainability and commands a social outlook in its execution, although its dependency on government action is often taken for granted. The government's past failure in infrastructure provision means that investment in social amenities must be prioritized and provided at affordable and accessible rates for low income people. This calls for more creative approaches to the provision of amenities that would support detection, response and care during infectious disease outbreaks not only in city centres but also in the marginal, low-income communities around them.

Indeed, the need for community partnerships in communicating health messages has become particularly critical if the state is to capture hard-to-reach groups that do not have access to conventional sources of information from the Internet, newspapers, television, and even the radio. However, this in itself will not guarantee uptake, as distrust of government sources could arise from long-standing injustices. It is therefore expedient that even in the management of health issues, system-wide changes in the governance system are required, especially in the area of strengthening local governance. This change will require accountability, transparency and participatory approaches that are accessible and believable to the people.

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APPENDIX

Radio Call-in Timetable

S/N	Date	Day	Time	Language	Radio Station & Frequency	Remark
1	03/12/2020	**Thursday**	**10:15 – 10:30 AM**	Yoruba	BOND FM 92.9FM	
2	04//12/2020	**Friday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM	
3	04/12/2020	**Friday**	**4:15 – 4:30 PM**	Hausa	BOND FM 92.9FM	
4	05/12/2020	**Saturday**	**12:45 – 1:00 PM**	Igbo	BOND FM 92.9FM	
5	06/12/2020	**Sunday**	**11:30 – 11:45AM**	Yoruba	BOND FM 92.9FM	
6	06/12/2020	**Sunday**	**1:15 – 1:30 PM**	Igbo	BOND FM 92.9FM	
7	07//12/2020	**Monday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM	
8	07/12/2020	**Monday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM	
9	07/12/2020	**Monday**	**6:30 PM**	English	Women FM	
10	08/12/2020	**Tuesday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM	
11	08/12/2020	**Tuesday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM	
12	08/12/2020	**Tuesday**	**6:30 PM**	English	Women FM	
13	09/12/2020	**Wednesday**	**11:15 – 11:30 AM**	Yoruba	BOND FM 92.9FM	
14	09/12/2020	**Wednesday**	**12:45 – 1:00 PM**	Igbo	BOND FM 92.9FM	
15	09/12/2020	**Wednesday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM	
16	09/12/2020	**Wednesday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM	
17	09/12/2020	**Wednesday**	**5:30 PM**	English	Women FM	
18	10/12/2020	**Thursday**	**10:15 – 10:30 AM**	Yoruba	BOND FM 92.9FM	
19	10/12/2020	**Thursday**	**12:45 – 1:00 PM**	Igbo	BOND FM 92.9FM	

20	11/12/2020	**Friday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM
21	11/12/2020	**Friday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM
22	12/12/2020	**Saturday**	**12:45 – 1:00 PM**	Igbo	BOND FM 92.9FM
23	13/12/2020	**Sunday**	**11:30 – 11:45AM**	Yoruba	BOND FM 92.9FM
24	13/12/2020	**Sunday**	**1:15 – 1:30 PM**	Igbo	BOND FM 92.9FM
25	14//12/2020	**Monday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM
26	14/12/2020	**Monday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM
27	14/12/2020	**Monday**	**6:30 PM**	English	Women FM
28	15/12/2020	**Tuesday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM
29	15/12/2020	**Tuesday**	**5:15 – 5:30 PM**	Yoruba	BOND FM 92.9FM
30	15/12/2020	**Tuesday**	**6:30 PM**	English	Women FM
31	16/12/2020	**Wednesday**	**11:00 – 11:15 AM**	Yoruba	BOND FM 92.9FM
32	16/12/2020	**Wednesday**	**12:45 – 1:00 PM**	Igbo	BOND FM 92.9FM
33	16/12/2020	**Wednesday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM
34	16/12/2020	**Wednesday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM
35	16/12/2020	**Wednesday**	**5:30 PM**	English	Women FM
36	17/12/2020	**Thursday**	**10:15 – 10:30 AM**	Yoruba	BOND FM 92.9FM
37	17/12/2020	**Thursday**	**12:45 – 1:00 PM**	Igbo	BOND FM 92.9FM
38	17/12/2020	**Thursday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM
39	18/12/2020	**Friday**	**3:15 – 3:30 PM**	Pidgin	Radio One 103.5FM
40	18/12/2020	**Friday**	**3:45 – 4:00 PM**	Hausa	BOND FM 92.9FM
41	19/12/2020	**Saturday**	**12:45 – 1:00 PM**	Igbo	BOND FM 92.9FM

42	21/12/2020	**Monday**	**3:30 – 3:45 PM**	Pidgin	Radio One 103.5FM

Jingle Airings

S/N	Date	Day	Time	Radio Station & Frequency	Remark
1	25/12/2020	**Friday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM	
2	25/12/2020	**Friday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM	
3	25/12/2020	**Friday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM	
4	25/12/2020	**Friday**	**10:00 AM**	WOMEN FM 91.7FM	
5	26/12/2020	**Saturday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM	
6	26/12/2020	**Saturday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM	
7	26/12/2020	**Saturday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM	
8	26/12/2020	**Saturday**	**11:27 AM & 4:27PM**	NIGERIA INFO LAGOS 99.3FM	
9	26/12/2020	**Saturday**	**11:40 AM & 5:55 PM**	WAZOBIA FM 95.1FM	
10	27/12/2020	**Sunday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM	
11	27/12/2020	**Sunday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM	
12	27/12/2020	**Sunday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM	
13	27/12/2020	**Sunday**	**10:00 AM**	WOMEN FM 91.7FM	
14	27/12/2020	**Sunday**	**11:27 AM & 4:27 PM**	NIGERIA INFO LAGOS 99.3FM	
15	27/12/2020	**Sunday**	**11:40 AM & 5:55 PM**	WAZOBIA FM 95.1FM	
16	28/12/2020	**Monday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM	
17	28/12/2020	**Monday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM	
18	28/12/2020	**Monday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM	
19	28/12/2020	**Monday**	**4:00 PM**	WOMEN FM	

				91.7FM
20	28/12/2020	**Monday**	**11:53 AM & 6:55 PM**	NIGERIA INFO LAGOS 99.3FM
21	28/12/2020	**Monday**	**11:40 AM & 6:10 PM**	WAZOBIA FM 95.1FM
22	29/12/2020	**Tuesday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
23	29/12/2020	**Tuesday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
24	29/12/2020	**Tuesday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
25	29/12/2020	**Tuesday**	**10:00 AM**	WOMEN FM 91.7FM
26	29/12/2020	**Tuesday**	**12:25 PM & 5:27 PM**	NIGERIA INFO LAGOS 99.3FM
27	29/12/2020	**Tuesday**	**12:55 PM & 5:10 PM**	WAZOBIA FM 95.1FM
28	30/12/2020	**Wednesday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
29	30/12/2020	**Wednesday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
30	30/12/2020	**Wednesday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
31	30/12/2020	**Wednesday**	**6:00 PM**	WOMEN FM 91.7FM
32	30/12/2020	**Wednesday**	**3:27 PM & 7:27 PM**	NIGERIA INFO LAGOS 99.3FM
33	30/12/2020	**Wednesday**	**3:40 PM &6:40 PM**	WAZOBIA FM 95.1FM
33	31//12/2020	**Thursday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
34	31//12/2020	**Thursday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
35	31//12/2020	**Thursday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
36	31//12/2020	**Thursday**	**10:00 AM**	WOMEN FM 91.7FM
37	31//12/2020	**Thursday**	**11:27 AM & 4:27 PM**	NIGERIA INFO LAGOS 99.3FM
38	31//12/2020	**Thursday**	**1:10 PM &4:40 PM**	WAZOBIA FM 95.1FM

39	01/01/2021	**Friday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
40	01/01/2021	**Friday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
41	01/01/2021	**Friday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
42	01/01/2021	**Friday**	**4:00 PM**	WOMEN FM 91.7FM
43	01/01/2021	**Friday**	**1:27 AM & 7:27 PM**	NIGERIA INFO LAGOS 99.3FM
44	01/01/2021	**Friday**	**12:55 PM &6:10 PM**	WAZOBIA FM 95.1FM
45	02/01/2021	**Saturday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
46	02/01/2021	**Saturday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
47	02/01/2021	**Saturday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
48	02/01/2021	**Saturday**	**12:55 PM & 6:55 PM**	NIGERIA INFO LAGOS 99.3FM
49	02/01/2021	**Saturday**	**11:10 AM & 7:55 PM**	WAZOBIA FM 95.1FM
50	03/01/2021	**Sunday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
51	03/01/2021	**Sunday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
52	03/01/2021	**Sunday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
53	03/01/2021	**Sunday**	**12:27 PM & 7:27 PM**	NIGERIA INFO LAGOS 99.3FM
54	03/01/2021	**Sunday**	**1:10 PM & 6:40 PM**	WAZOBIA FM 95.1FM
55	04/01/2021	**Monday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
56	04/01/2021	**Monday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
57	04/01/2021	**Monday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
58	04/01/2021	**Monday**	**10:00 AM**	WOMEN FM 91.7FM

59	04/01/2021	**Monday**	**11:53 AM & 6:55 PM**	NIGERIA INFO LAGOS 99.3FM
60	04/01/2021	**Monday**	**12:25 PM &6:55 PM**	WAZOBIA FM 95.1FM
61	05/01/2021	**Tuesday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
62	05/01/2021	**Tuesday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
63	05/01/2021	**Tuesday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
64	05/01/2021	**Tuesday**	**7:00 PM**	WOMEN FM 91.7FM
65	06/01/2021	**Wednesday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
66	06/01/2021	**Wednesday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
67	06/01/2021	**Wednesday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
68	06/01/2021	**Wednesday**	**10:00 AM**	WOMEN FM 91.7FM
69	07/01/2021	**Thursday**	**8:00 – 8:30 AM & 4:30 – 5:00 PM**	METRO FM 97.7FM
70	07/01/2021	**Thursday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
71	07/01/2021	**Thursday**	**10:00 – 10:15 PM & 5:00 – 5:30 PM**	Radio One 103.5FM
72	07/01/2021	**Thursday**	**6:00 PM**	WOMEN FM 91.7FM
73	08/01/2021	**Friday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
74	09/01/2021	**Saturday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM
75	10/01/2021	**Sunday**	**10:00 – 10:15 AM & 5:00 – 5:30 PM**	BOND FM 92.9FM

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About the Book

The chapters in this book are drawn from the research project titled '**A Study of COVID-19 Adaptation Strategies for Residents of Multi-Tenanted Housing in Lagos (Grant Ref: AH/V006428/1)**, which was funded by the Arts and Humanities Research Council (AHRC) of the UK Research and Innovation (UKRI) under the "AHRC GCRF URGENCY GRANTS." The central aim of the project was to investigatee and propose realistic adaptation strategies for protecting residents of multi-tenanted housing from COVID 19 spread. Lagos was used as a case -study as it was the hotspot for both COVID 19 infection and treatment in Nigeria. This is also in recognition of the massive scale of housing and neighbourhood facility deficiency that residents are exposed to. While the study was carried out during the COVID-19 lockdown period, we adopted an interdisciplinary research method, weaving in literature, creative arts, and music with housing issues in data collection, analysis, output design, and dissemination. The chapters in this book provide a narrative of historical antecedents in infectious disease management in Lagos, awaken the literal interpretation of disease spread, control and management and how disadvantaged peoples may be envisioned to adapt to their vulnerability, and also explore the role of the creative arts in enabling people find some psychological support during the pandemic. The chapters establish that housing adequacy for all categories of residents in cities like Lagos is a serious dimension of spatial justice that is worthy of further public sector investment.

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