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Affordable housing in Nigeria's slums: combating infectious diseases and advancing SDG 3

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Abstract

Purpose – Studies showed that sustainable cities and communities through affordable and accessible housing provision have a significant positive relation with good health and well-being (Sustainable Development Goal 3). Therefore, Nigeria's slum locations may promote infectious diseases if not addressed. Extant literature about the issues facing affordable housing provision in slum locations is scarce. This study investigated the issues and proffered suggestions to improve affordable housing provision in slum locations and, by extension, improve mitigating infectious diseases and achieving Goal 3.

Design/methodology/approach – The researchers utilised a qualitative research design using a phenomenology approach. This study employed snowball and purposive sampling techniques to select the experts, and 40 interviews were conducted to achieve saturation across five major cities in Nigeria. This study utilised a thematic analysis of the primary data and findings presented in the themes.

Findings – The findings reveal that infectious/contagious diseases spread faster in slum locations. Lax slum housing upgrading programmes, weak institutional framework, inadequate housing funding, rural-urban migration, inadequate affordable housing policy, lax political will, absence of basic infrastructure in sub-urban locations, high rate of unemployment and lack of national housing database were identified as the issues facing Nigeria's affordable housing provision in slum locations. Findings suggested measures to mitigate infectious/contagious diseases through affordable housing provision and, by extension, improve achieving Goal 3.

Originality/value – Besides pro-affordable housing programmes, governments should strengthen public housing institutions by upgrading slum locations with affordable housing, providing basic amenities in sub-urban locations and establishing a sustainable institutional framework to boost affordable housing.

Keywords Affordable housing, Infectious disease, Nigeria, Slum location, Sustainable cities and communities, Sustainable development goal 3

Paper type Research paper

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1. Introduction

As the world becomes increasingly urbanised and interconnected, urbanisation and opening up of sub-urban locations in some developing countries may follow a different speed. The pressure in urban locations on demand for shelter, especially from the urban low-income earners or disadvantaged, could turn the environs into slums (Ebekozién *et al.*, 2021). People's congestion in close communities to urban or sub-urban locations can increase the poor quality of the shelters within the area (Shah *et al.*, 2019). This seriously escalates infectious disease threat to urban populations if it is not curbed. There is a concern that the world urban population will top six billion by the year 2050, and most of the growth will occur in developing nations (Nicholson *et al.*, 2018). In many developing countries, besides this estimate, there has been a simultaneous rise in rural-urban migration and increased urban slums because of the population pressures. The UN-Habitat (2016), Wohi (2017), and Nicholson *et al.* (2018) reported that over one billion people globally live in slums, and there is no sign of mitigating the rise, especially in developing countries, including Nigeria. This calls for global concern if not addressed because of the interconnection between increasing urbanisation and infectious diseases. This threatens the people's health and well-being (Sustainable Development Goal 3 [SDG 3]).

Housing provision is pertinent for every human being and a component of the urban built environment. The urban built environment includes infrastructure, open spaces, streets, buildings and residential houses (Nicholson *et al.*, 2018). Housing provision is categorised as a physiological need in Abraham Maslow's pyramid of needs (Maslow, 1943). Ebekozién (2019) corroborated Maslow's theory. The right to a shelter cannot be overstated, but the reality is different with increasing urban and peri-urban slums. It has increased the urban centres to grow outwards and upwards, building a prime setting for microbial transmission of infectious disease pathogens (Nicholson *et al.*, 2018). The infectious/contagious diseases include Ebola, Norovirus, Influenza, Meningitis, Pertussis, Tuberculosis, Measles, COVID-19 and Monkeypox (Mpox). The social and physical environment of the people living in slum locations, compounded with overcrowding and poverty, may increase the risk and spread of infectious diseases. This action, if addressed, may ensure the achievement of Goal 3. Ezech *et al.* (2016) identified the absence of hygiene, sanitation, water services, inadequate affordable houses and basic infrastructure as the issues that cause infectious diseases to spread faster in slum locations. The absence or shortage of these basic amenities, compounded with economic and social challenges associated with slum location, will enhance waterborne and other contiguous diseases and may lead to worsening health consequences. This study focuses on infectious diseases using Mpox as a case study. It is one of the contiguous/infectious diseases prominent in African countries' slum locations (Lodhi, 2024) and found in 13 African countries and its new form of spreading (WHO, 2022). The housing shortage in cities may make it challenging to manage infectious diseases in slum locations, including Mpox.

Studies (Udodiong, 2016; Bureau of Public Service Reform (BRSR), 2017; Amaefule, 2017; Moore, 2019; Ndukwe, 2019; Saidu and Yeom, 2020; Ebekozién, 2020; Sunday *et al.*, 2021; Ebekozién *et al.*, 2021, 2022; Akinwande *et al.*, 2024) results show a dearth of affordable housing across Nigerian cities. Besides Ndukwe's (2019) and Sunday *et al.* (2021) reviewed papers, their work was not from the perspective of mitigating infectious diseases. Filling this gap via a qualitative research design is a component of this study's motivation. Ndukwe (2019) reviewed how the affordable housing challenge could threaten advancing SDG 3 in Nigeria. Saidu and Yeom (2020) evaluated key criteria for a sustainable and affordable housing framework to advance household welfare in Nigerian cities. Ebekozién *et al.* (2022) investigated informal urban settlement residents' level of compliance and proffered measures to prevent or mitigate the spread of COVID-19. Ebekozién and Aigbavboa (2021) also investigated the recovery phase of Nigerian construction sites from the COVID-19 pandemic and the role of digital technology. COVID-19 is a contagious disease that spread globally in early 2020 and 2021. Akinwande *et al.* (2024) investigated possible interventions to improve affordable housing for urban low-income earners in Lagos, Nigeria. But none from the perspective of mitigating

infectious diseases. This study investigates the perceived issues and proffers suggestions to improve affordable housing provision in slum locations and, by extension, improve mitigating infectious diseases and achieving Goal 3. [Moore \(2019\)](#) reported that as of December 2018, an estimated 20 million units were in the housing deficit and required N21 trillion (N1,500/US\$1) to finance the deficit with a population of over 200 million. This housing deficit is disturbingly high. Therefore, Nigeria's slum locations may promote infectious diseases if not addressed. This is a threat to Goal 3. Extant literature about the issues facing affordable housing provision in slum locations is scarce. This study will birth valuable measures to improve affordable housing provision as a panacea to mitigating infectious diseases and, by extension, improve achieving Goal 3 in Nigerian cities via the following objectives:

- (1) To investigate the issues facing Nigeria's affordable housing provision in slum locations.
- (2) To suggest measures to improve affordable housing provision as a panacea to mitigating infectious diseases and, by extension, improve achieving Goal 3 in Nigerian cities.

2. Literature review

2.1 Infectious diseases

Infectious diseases are threats to humanity, especially in some developing countries with weak financial support and absence or inadequate basic health facilities because they are contagious. An infectious disease is a disease (such as influenza, cholera, measles, Covid-19, Mpox, Ebola, dengue fever, Zika virus or tuberculosis) caused by the entry into the body of microorganisms (such as bacteria, viruses, or fungi) which grow and multiply there. It can be transmitted by contact with an infected person or infected fluids or bodily discharges, or by ingestion of contaminated water or food, or by contact with a contaminated surface or object. Infectious diseases are categorised into two main groups. This includes emerging and re-emerging infectious diseases. Emerging diseases are diseases that occurred before in humans or occurred previously but affected a part of a country or region ([Morse, 1995](#)). Examples are Ebola and AIDS [Krause \(1992\)](#) affirmed that re-emerging infectious diseases are diseases that once were major health issues in a specific region or globally and then weakened but are again becoming health issues (Mpox is an example). The most recent one that re-emerged is the Mpox disease, which is spreading fast across African countries ([Lodhi, 2024](#)).

Monkeypox physical appearance diagnosis is similar to smallpox (rash), but it is caused by the Monkeypox virus ([Mitja et al., 2023](#)), leading to zoonotic viral infection. The first human case was discovered in the Democratic Republic of the Congo in 1970. The outbreaks, mostly in some African countries, triggered the WHO to declare monkeypox as a Public Health Emergency of International Concern in July 2022. By November 2022, the [WHO \(2022b\)](#) and [US Centres for Disease Control and Prevention \(2022\)](#) recorded more than 78,000 cases in more than 100 countries. The disease is endemic in many African countries. This includes Gabon, Democratic Republic of Congo, Cameroon, Benin, South Sudan, Sierra Leone, Nigeria and Liberia ([WHO, 2022](#)). For Ghana, it was found in animals. Democratic Republic of Congo had the highest cases (1,284) and 58 deaths ([WHO, 2022](#)). [Patel et al. \(2022\)](#) found that numerous clinical studies have recommended that the disease has unique clinical and epidemiological attributes. This includes rash, skin and anorectal abscesses, fever, rectal pain and crusts in the genitalia. Like most infectious diseases, one way to mitigate the spread of Mpox is to isolate confirmed persons. This is challenging in slum locations because of limited space and shared facilities such as restrooms and kitchens. The health facility as an alternative is not available or unaffordable in most slum locations. [Ezeh et al. \(2016\)](#) found that lacking basic amenities in slum locations will increase the inhabitants' risk of spreading infectious diseases. This calls for concern.

2.2 Urban slum

Urban slum locations are dominated by rural-urban migrants, low-income earners and the disadvantaged. Most urban slums and informal settlements have similar attributes but are the same. The United Nations Educational Scientific and Cultural Organisation (UNESCO) (2009) defined a slum as “a contiguous settlement where the inhabitants are characterised as having inadequate housing and basic services.” This study adopts the UN-Habitat (2003) definition as promulgated by the UN Human Settlements Programme (UN-Habitat), which defines a household slum as: “a group of individuals that live under the same roof that lack one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living space, durability of housing and secure tenure.” A lack of one or more of these items could enhance the spread of infectious diseases (Ezeh *et al.*, 2016; Ebekozién *et al.*, 2022). Shah *et al.* (2019) described slum as a location or an area that accommodates more than the intentional resident, particularly in urban locations and unconventional structures with poor-quality construction. High rental fees, housing shortage, high rural-urban migration, under-employment and unemployment are possible causes of living in slums (Ebekozién *et al.*, 2021).

In Nigeria, several attempts to address the housing demands of the urban low-income earners failed (Ebekozién *et al.*, 2022). Bridging the social and economic inequality gaps between the rural and urban habitats is one panacea to mitigating rural–urban migration (Ezeh *et al.*, 2016; Ndukwe, 2019; Saidu and Yeom, 2020; Sunday *et al.*, 2021). Addressing this is critical to mitigating urban slums and the consequences such as contaminated environment and water with soil waste (Bain *et al.*, 2014; Ezeh *et al.*, 2016), local pollution from factories, geographic hazards such as flooding (Landrigan *et al.*, 2015) and high crime rates (UN-Habitat, 2003). Nakagiri *et al.* (2016) opined that pit latrines with slabs are unsuitable in a crowded slum environment. However, it is qualified as “improved sanitation” in the WHO/UNICEF Joint Monitoring Programme definition (Satterthwaite, 2016), yet about 40% of the sub-Saharan African urban population has “improved sanitation” (Ezeh *et al.*, 2016). The situation in slum locations can only be worse. Besides enhancing the spread of Mpox and complicating treatment because of inadequate or absence of shelters and other basic amenities, they threaten the achievement of Goal 3. Ezeh *et al.* (2016) emphasised that inadequate homes, poor housing, under-nutrition, malnutrition, violence and the poor state of mental health trigger the breeding grounds for vectors and parasites of infectious diseases. These attributes are more pronounced in households living in slums. Housing affordability is challenging for most urban low-income earners and disadvantaged, with no better option than embracing slum locations.

2.3 Affordable housing

Affordable housing provision, as it relates to slum locations and mitigating infectious diseases, is a critical area that has yet to receive the necessary attention. Affordable housing is a key contributor to the health and well-being of the inhabitants (Ndukwe, 2019; Saidu and Yeom, 2020; Ebekozién, 2020). Saidu and Yeom (2020) emphasised that it is a key component in improving household welfare in cities in developing countries such as Nigeria. It is a trending discussion in extant literature (Patel *et al.*, 2018; Ebekozién, 2020; Akinwande and Hui, 2022; Ali *et al.*, 2023; Akinwande *et al.*, 2024), but the majority are skewed towards a supply-oriented standpoint. The role of affordable housing provision in enhancing health and well-being through prevention/mitigation of infectious diseases needs more research. This is a component of the study’s motivations. Housing the urban low-income earners is a global challenge and requires an all-inclusive mechanism through a paradigm shift in research and construction approaches to inform positive outcomes (Akinwande and Hui, 2022). This study adopted the US Department of Housing and Urban Development’s indicator of housing affordability, which emphasised that for housing affordability, total housing costs at or below 30% of gross annual income are affordable (Belsky *et al.*, 2005; Ebekozién, 2020). Affordable housing provision faces challenges, especially for the urban low-income earners. Ebekozién

(2020) found that policies and programmes for sustainable, affordable housing for the urban low-income earners are challenging. Ebekozién's (2020) corroborated with Anacker (2019), who discovered that affordable housing might be challenging to offer measures through programmes. Anacker (2019) suggested that the government should map out empty cities and for residential households' development, motivate local councils to engage in housing provision, eliminate bureaucracy in land-use authorisations to enhance affordable housing funding and create an enabling environment to attract investors.

Several administrations have attempted to address the housing issue in Nigeria, but the demand-supply gap continues to increase geometrically, especially for the urban low-income earners and disadvantaged (Ebekozién *et al.*, 2021, 2022). Urban squatters are on the increase because of housing shortage and unaffordability across major Nigerian cities (Ebekozién *et al.*, 2021). A scenario like this is a breeding ground for Mpox if not addressed. Lodhi (2024) and the World Health Organisation (WHO) (2022) reported that the WHO declared Mpox a global public health emergency of international concern (PHEIC) on the 14th of August 2024. The WHO said that Mpox cases have been discovered in 13 African countries, including in the spreading pattern. In two years, this is the second time the WHO has issued an alert regarding Mpox. The first PHEIC was in 2022 (Lodhi, 2024). Preliminary findings reveal that infectious diseases such as COVID-19, Mpox, cholera, etc., are more rampant in slum locations such as internally displaced persons camps. The health concerns may be congestion, hygiene, sanitation and a clean environment. This may be due to the housing shortage. There is a paucity of literature regarding how improving affordable housing provision can be a panacea for mitigating infectious diseases. Thus, this study attempts to generate a theoretical basis regarding issues facing Nigeria's affordable housing provision in slum locations and proffer measures and, by extension, improve achieving Goal 3. This is one novelty contribution to using affordable housing provision to mitigate infectious diseases and, by extension, improve the achievement of Goal 3 in Nigerian cities.

In Nigeria, the National Housing Policy (Revised, 2012 document) failed in implementation (Ndukwe, 2019; Ebekozién, 2020). Ebekozién (2020) alleged unethical practices and lack of institutional framework to be the reasons for the failure. Several programmes have failed, including the Family Housing Fund and the Federal Integrated Staff Housing (FISH) Programme (Ebekozién, 2020). The government should give housing provision attention as one of the key pillars of the four-welfare state (housing, education, health and social security) (In Kemeny's work as cited in Ruonavaara, 2018; Ebekozién, 2019). The government needs to see housing provision investment as a critical social responsibility to improve other pillars of welfare. Phang (2018) argued that government is always on the frontline for pro-masses programmes for countries with evidence of affordable housing provisions, such as Hong Kong, Austria and Singapore. This includes land subsidies, housing loans, rent-to-own schemes, basic infrastructure in sub-urban locations, etc. These measures may prevent or mitigate infectious diseases and, by extension, improve achieving Goal 3.

2.4 Sustainable development goal 3 (Goal 3)

Good health and well-being (Goal 3) is one of the 17 SDGs that emerged from the 2015 United Nations Agenda (United Nations, 2022a). The United Nations (2022b) opined that the 17 SDGs comprise 169 targets and 230 indicators. Ebekozién *et al.* (2024) affirmed that the Agenda is a plan of action for the 3P (planet, people and prosperity). This is reinforced by the New Urban Agenda (NUA) and the African Union's Agenda 2063. Ebekozién *et al.* (2024) corroborated Valencia *et al.* (2019), who asserted that the 2030 Agenda is all-inclusive. This study focuses on Goal 3 (good health and well-being) because of the relationship between adequate and affordable housing provision and good health and well-being. Improving affordable housing provision may mitigate infectious diseases and, by extension, improve achieving Goal 3. Good health and well-being are achievable in sustainable and affordable housing, knowing the implications and breeding of infectious diseases in slum locations. Thus, government interventions are paramount to achieving this goal. This is because most urban

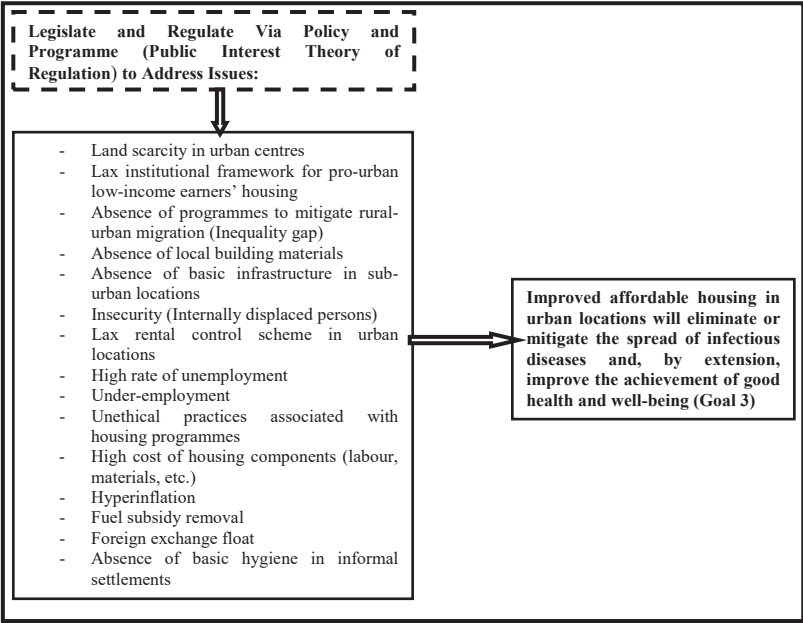
low-income earners may have challenges regarding affordable housing for rental schemes in cities. Goal 3 is relevant and could be linked to Goals 1 (end poverty) and 2 (end hunger) because good health would enhance dynamic job creation. Hence, the need to conceptualise the study to achieve the goal of improving the achievement of SDG 3.

2.5 Theory supporting the study's framework

The main concepts and theory supporting the study's framework for mitigating infectious diseases and, by extension, improving Goal 3 across Nigeria's cities cannot be overstated. Preliminary findings reveal that many factors influence low-income earners and disadvantaged groups to reside in slum locations, and the majority of Nigerian cities have slums located within or sub-urban locations. The proposed study's framework suggests measures to prevent or mitigate the spread of infectious diseases through the improvement of affordable housing for slum inhabitants and, by extension, improve achieving Goal 3. The government is required to play a critical role and embrace affordable housing (rental or homeownership scheme) as a major pillar of welfare to achieve this task (Ebekozién, 2019). The study adopted the Public Interest Theory of Regulation. It is known as the "helping hand" or "Public Interest" Regulation Theory (Pigou, 1932). The theory has two assumptions. First, free markets often disappoint due to the issues of domination or externalities. Second, the government is concerned and capable of revising the housing market challenges through regulation to the interest of the public (Hantke-Domas, 2003). Housing researchers (Hertog *et al.*, 2003; Ebekozién, 2019; Ebekozién *et al.*, 2021) employed this regulation theory to appraise what governments should do to enhance affordable housing for their citizens. Ebekozién (2019) affirmed that Malaysia's Government's pro-poor housing programmes are anchored on the Public Interest Theory of Regulation. Hantke-Domas (2003), Iheme (2017) and Ebekozién *et al.* (2021) avowed that the regulation encourages the welfare of the masses rather than the interests of a few parties. Iheme (2017 and Ebekozién (2019) adopted the theory in a similar affordable housing study but did not address mitigating infectious diseases and improving the achievement of Goal 3. One novelty of the theory is that it is for the "public interest;" hence, connecting this theory to prevent or mitigate infectious diseases through providing affordable housing and, by extension, improving the achievement of Goal 3 cannot be overstated. Figure 1 presents the proposed framework. This study will address the issues reviewed from the extant literature via government regulation with public interest in mind. This is the goal of the theory: public interest first before others in any decision-making through legislating and regulating with viable policies and programmes to prevent or mitigate hindrances to affordable housing provision and, by extension, improve the health and well-being of the inhabitant because of the hygiene associated with adequate housing environment.

3. Research method

The research adopted a qualitative research design using a phenomenological approach. Stysko-Kunkowska (2014), Jaafar *et al.* (2021) and Ebekozién *et al.* (2025) affirmed that this approach is descriptive and exploratory. The researchers employed the snowball and purposive sampling techniques. Creswell and Creswell (2018) asserted that the purposive sampling method offers the sample to be selected based on the study's goal and pattern of the population. Snowball allows the investigators' interviewees to recruit other expert participants for the study. The researchers collected data from 40 face-to-face and virtual semi-structured interview questions across five cities. The researchers also achieved this study at the 36th participant. This outcome validated that the 40 participants for the analysis were adequate. The research saturation was established because a new concept was absent (Ebekozién *et al.*, 2025) after the 36th participant. The cities include Lagos, Kano, Abuja, Benin City and Port Harcourt, as presented in Table 1. Kano and Lagos have the highest population in the northern and southern cities, respectively (Ebekozién *et al.*, 2021), with evidence of urban and sub-urban slums. The reason for the mixed data collection approach was to reduce the costs associated with data collection and enhance the



Source(s): Authors' work

Figure 1. Proposed study's framework

Table 1. Participants description and locations

Participant/Rank	City/Participant code					Total
	Lagos A	Kano B	Abuja C	Port Harcourt D	Benin city E	
Residents in informal urban settlements for at least five years	P1, P2	P3, P4	P5, P6	P7, P8	P9, P10	10
Health workers within 10 km of the informal urban settlements with not less than ten years of experience	P11	P12	P13	P14	P15	5
NGOs managing internally displaced persons with not less than ten years of experience	P16	P17	P18	P19	P20	5
Housing developers with not less than ten years of experience	P21	P22	P23	P24	P25	5
Housing consultants with not less than ten years of experience	P26	P27	P28	P29	P30	5
Academicians/researchers in housing matters with not less than ten years of experience	P31	P32	P33	P34	P35	5
Senior staffers in govt. housing-related agencies with not less than ten years of experience	P36	P37	P38	P39	P40	5
Total number of participants						40
Source(s): Authors' work						

participants' contacts in other locations with similar features. The study adopted manual analysis to analyse the data and presented it in a thematic pattern (Ebekozién *et al.*, 2025b, c). Table 1 shows the interviewees' backgrounds. However, individual names and organisations were masked in line with this study's ethical policy. The participant's posts prove they know about Nigeria's affordable housing, infectious diseases and SDG 3 matters. This aligns with the ethical research policy, and senior colleagues reviewed the semi-structured interview questions before the final study. It was subject to ethical review and approval. However, the ranks show that the interviewees were informed regarding the topic.

This study conducted a pilot study with four participants before the final study from June 2024 to early August 2024. The interviews took an average of 30 min. The study data were collected and analysed manually. The semi-structured questions were guided by arranged interview themes. The questions started from general to inquiring after explicit responses from the participants, as presented in Appendix. The researchers employed attribute, in vivo, emotion and theming coding strategies (Saldana, 2015). This study adopted quality evaluation strategies to strengthen the reliability of the data, as presented in Table 2. This would enhance the findings' credibility, reliability, validity and dependability (Ebekozién *et al.*, 2025b, c). Eighty codes were generated and organised into 10 sub-themes based on occurrence, frequency and reference. Two themes emerged from the 10 sub-themes.

4. Findings and discussion

The encumbrances faced by Nigerian affordable housing have been explored by scholars (Iheme, 2017; Moore, 2019; Ndukwe, 2019; Saidu and Yeom, 2020; Ebekozién, 2020; Ebekozién *et al.*, 2021) but none has addressed it from the perspective of how affordable housing provision can mitigate infectious diseases and, by extension, improve achieving Goal 3 in Nigerian cities. This study also identifies issues facing Nigeria's affordable housing provision in slum locations nationwide. The findings reveal that infectious/contagious diseases such as influenza, cholera, measles, COVID-19, Mpox, Ebola, diarrheal, dengue fever, Zika virus, tuberculosis, meningitis and pertussis spread faster in slum locations (P11 – P15, P27, and P34). This study's findings reveal that slums in Nigeria's urban and sub-urban locations can prevented or mitigated through a multitasking approach.

4.1 Theme one: issues facing affordable housing provision in Nigeria

The challenge of affordable housing is a global issue and varies from country to country. However, this study investigates the issues facing Nigeria's affordable housing provision in slum locations. Findings reveal that the issues facing affordable housing provision in slum

Table 2. The research's quality evaluation strategies

Method	Assessment strategies	The phase of research
Reliability	Consistent interviewer (The lead author)	Data collection
Validity	The adoption of a recognised method (semi-structured interviews adopted)	Data collection
Generalisability	Recognition of limitations due to sample size and potential interviewer bias (Focus on experts in housing, infectious diseases and SDG 3)	Data collection
Transferability	Compare the study's implications against the current literature	Data analysis
Credibility	Theme approach to establish a pattern from the data	Post data analysis
	Objective by objective	analysis
Dependability	Developing semi-structured interview guidelines (Appendix)	Data analysis
Source(s): Modified from Ebekozién (2019)		Research design

locations are multi-dimensional. A multi-dimensional mechanism is required to address them. Findings reveal slum locations within a maximum of 10 kilometres from the city of five locations covered. The findings also reveal that in some cities, for example, Lagos, Abuja and Port Harcourt, many residential estates and housing within the cities were unoccupied, yet there are urban slum locations (informal settlements). Affordability is the major challenge with urban housing, especially for the low-income earners (majority). One pertinent contribution of this theme is that most issues are government-related, as presented in Table 3. The removal of fuel subsidies and the floating of the local currency have not helped matters. It compounded the hyperinflation on building materials and forced more people to embrace slum locations as a last resort (majority), as presented in Figures 2–9. Figures 2–9 show some of the slum locations in this study covered cities. For ethical reasons, the slum locations are concealed. However, findings show that in some locations, drainage water is the main source of water for households’ usage during the summer (P4, P12 and P22). Findings reveal that the inconsistencies in the hyperinflation and foreign exchange rates compounded the issue for the urban slum. As of April 2023, a bag of 50 kg cement was sold for N5,500 (exchange rate was N750/US\$1) and now (2024) sold for above N10,000 (exchange rate N1,400 – N1,600/US \$1) (P11, P16, P33 and P35).

This study identified 19 issues. From the 19 issues, scarcity of land in urban locations, high rate of unemployment, high cost of housing components, hyperinflation, fuel subsidy removal, foreign exchange float, lax slum housing upgrading programmes, inadequate housing funding, inadequate affordable housing policy and lack of national housing database emerged as the main issues facing affordable housing provision in Nigeria’s slum locations. Other issues, as presented in Table 3, include lax institutional framework, rural-urban migration, low patronage of building materials local content, absence of basic infrastructure in sub-urban locations, insecurity, the lax rental control scheme in urban locations, under-employment, lax political will, unethical practices linked with housing programmes. The lack of a housing policy framework that can identify the housing gap, urban slum locations (Figures 2–9), expected funding required and measures to address future urban slums is missing (majority). This is critical for viable short- and long-term planning (P17, P21, P27, P30, P34, P36, P38 and

Table 3. Identified issues facing affordable housing provision in Nigeria’s slum locations

Issue	Source(s)
Scarcity of land in urban locations	Majority
Lax institutional framework	P17, P21, P27, P30, P36, P38 and P40
Rural–urban migration	P2, P3, P6, P9, P22, P29, P35 and P38
Low patronage of building materials and local content	P25, P28, P30 and P34
Absence of basic infrastructure in sub-urban locations	P1 – P10, P13, P16 – P20, P24, P27, P35 and P39
Insecurity	P6, P10, P23 and P30
The lax rental control scheme in urban locations	P11, P14, P23, P28 and P33
High rate of unemployment	Majority
Under-employment	P1 – P6, P14, P25, P30 and P36
Lax political will	P7, P17, P28 and P32
Unethical practices linked with housing programmes	P24, P27, P34 and P35
High cost of housing components	Majority
Hyperinflation	Majority
Fuel subsidy removal	Majority
Foreign exchange float	Majority
Lax slum housing upgrading programmes	Majority
Inadequate housing funding	Majority
Inadequate affordable housing policy	Majority
The absence of a national housing database	Majority
Source(s): Authors’ work	



Source(s): Authors' work

Figure 2. Slum location A



Source(s): Authors' work

Figure 3. Slum location B

P40). “ Many housing stakeholders still believe the housing needs of Nigeria is about 17 million. This may not be true. We need to identify the slums. How many Nigerians really need houses? Why are houses built in urban not occupied? How can the government intervene through policies that apply to some countries, such as Malaysia? What assistance can the government provide to encourage housing developers to build an affordable rent-to-own or rental scheme for the urban low-income earners? Etc” said Participant P40. This could form part of the sustainable institutional framework.

Participant P2 says, “ politicians only remember us during the election campaign with ‘elephant promises’ such as slum upgrading, employment opportunities, open-up sub-urban



Source(s): Authors' work

Figure 4. Slum location C



Source(s): Authors' work

Figure 5. Slum location D

for relocations, etc., but are nowhere to be found after the election. The level of poverty and hunger in the land has made it difficult for us to vote them out for a change” Findings reveal that without a selfless political will to address housing issues, especially for the urban low-income earners, urban slum locations would remain (majority). “ . . . we must face the reality. How many fresh graduates are employed yearly? How many can afford to rent adequate shelter with less than N100,000 (N1,500/US\$1) monthly? This is for the few lucky ones that secure jobs. The society has created a social gap between the rural and urban habitat, thus encouraging rural-urban migration and putting pressure on the few available housing occupied by the low-income earners This promotes slums” said Participant P10. Regarding the high rate of unemployment, high cost of housing components, hyperinflation, fuel subsidy removal and foreign exchange float as major issues facing affordable housing provision in Nigeria’s slum locations, findings show that the high cost of living is compounding the housing challenges, especially in the urban locations (majority). Participant P30 says, “ even if the



Source(s): Authors' work

Figure 6. Slum location E



Source(s): Authors' work

Figure 7. Slum location F

government opens up sub-urban locations to decongest the cities, it is practically impossible to have sufficient housing construction delivered because of the high cost of building materials and hyperinflation rampaging the country” Stakeholders should address urban slums because they convey inequality and exclusion.

4.2 Theme two: measures to improve affordable housing provision in slum locations

Theme two provides an opportunity to proffer measures to improve affordable housing provision in urban slum locations, mitigate infectious diseases and, by extension, improve achieving Goal 3 in Nigerian cities. This study's findings agree that urban slum locations or informal settlements can breed infectious diseases because of attributes such as lack of drainage, absence or insufficient waste disposal, poor health facilities, inadequate housing (focus of this study), water-logged, poor latrines (Figures 3, 4, and 7), social issues, insecurity,



Source(s): Authors' work

Figure 8. Slum location G



Source(s): Authors' work

Figure 9. Slum location H

uninhabitable – Figure 8 (garbage dumps, powerline, railways, wetlands, etc.), and overcrowded population (P11 – P15, 25, P30, P35 and P39). If not addressed, these features can threaten the achievement of good health and well-being (Goal 3). This theme suggests measures to improve achieving SDG 3 through providing affordable housing in urban slum locations and, by extension, mitigating the spread of infectious diseases. The measures are highlighted in Table 4. Among the 16 measures, pro-employment programmes for low-income earners, encourage local production of building materials to mitigate high cost, downward review of MPR to address hyperinflation, pro-poor programmes targeted at upgrading slums to habitable environment, improve low-income earners accessibility to housing mortgage, review housing policy to address database and affordable housing issues, improve awareness regarding basic hygiene and sensitisation of basic ways to manage infectious diseases in low-

Table 4. Identified measures to improve housing provision in slum locations

Measure	Source(s)
Urban land subsidy to improve self-help scheme	Majority
Sustainable institutional framework to promote pro-urban housing for low-income earners and upgrade designated slums to habitable environment	P17, P21, P27, P30, P36, P38 and P40
Provide basic infrastructure in sub-urban to mitigate rural–urban migration	P2, P3, P6, P9, P22, P29, P35 and P38
Encourage alternative local building materials to mitigate the high cost of building materials because of the naira devaluation	P13, P16 – P20, P25, P28, P30, P34, P35 and P39
Address internal insecurity to mitigate internally displaced person locations (majority are slums)	P6, P10, P23 and P30
Encourage rent-to-own schemes with government support in urban locations	P11, P14, P23, P28, P33, P36, P38 and P40
Political will is required to address delivery affordable housing for low-income earners	P1 - P7, P17, P23, P28, P33, P37 and P39
Transparency and accountability are critical factors that can influence housing programmes to the right beneficiary	P13, P20, P24, P27, P34 and P35 - P39
Pro-employment programmes for low-income earners, especially habitats in slum locations	Majority
The government should encourage local production of building materials to mitigate high costs	Majority
Downward review of Monetary Policy Rate to address hyperinflation	Majority
Pro-poor programmes targeted at upgrading slums to a habitable environment	Majority
The government should improve low-income earners' accessibility to housing mortgages via soft loans with relaxed conditions	Majority
Review housing policy to address database and affordable housing issues	Majority
Improve awareness of basic hygiene in low-income locations	Majority
Sensitisation of basic ways to manage infectious diseases in low-income locations	Majority

Source(s): Authors' work

income locations were frequently identified as measures to improve affordable housing provision in urban slum locations and mitigate infectious diseases and, by extension, improve achieving Goal 3 in Nigerian cities. For other measures, refer to [Table 4](#).

Concerning urban slums upgrading to a habitable environment and a downward review of the MPR to address hyperinflation, Participant P21 says, “... *crisis is inevitable in an economy where there is upward MPR (recently increased the MPR 22.5%). I'm not surprised that many businesses (foreign and local) are shutting down. The Central Bank of Nigeria (CBN) needs to revisit its monetary policies and do what is necessary to attract foreign investors and increase productivity. This is the way to rebuild a fragile economy like Nigeria ...*” The liquidity tightening in the banking sector has done more damage than good, is counterproductive and contributes to hyperinflation (P20, P31, P33 and 38). The CBN should review the monetary policies to bring inflation one digit for a sustainable business environment. This includes foreign exchange stability and one-digit interest rates for housing loans, especially for low-income earners who embrace self-help schemes. Also, findings reveal that urban slum regeneration needs to be all-inclusive (majority). This is critical to contributing to the achievement of UNSDGs. Slum regeneration is about lasting environmental, social and economic improvement (P26, P30 and P34). These are drivers tailored toward sustainable development.

5. Discussion of findings

The impact of insufficient affordable housing in urban locations, especially for the urban low-income earners and disadvantaged, if not drastically addressed, may enhance the spread of

infectious diseases and, by extension, threaten the achievement of Goal 3. Thus, this study investigated affordable housing provision issues in Nigeria's slum locations. Regarding the high rate of unemployment, high cost of housing components, hyperinflation, fuel subsidy removal and foreign exchange float as major issues, results align with [Ebekozién et al. \(2024b\)](#) and the National Bureau of Statistics (NBS) (2024a, 2024b). NBS (2024a, 2024b) reported that the annual inflation rate climbed from 21.34% in December 2022 to a 28-year high of 29.9% in January 2024. This rise affects Nigeria's building materials. [Ebekozién et al. \(2024b\)](#) found that the impact of hyperinflation on building projects (materials, urban land and labour) could hinder the achievement of construction-related UNSDGs. This includes Goal 3 because the absence of affordable housing can enhance the spread of infectious diseases ([Ebekozién et al., 2022](#)), such as COVID-19, Mpox, cholera, etc. (refer to [Figure 8](#)). Findings also agree with [Ayeyemi and Osadebamwen \(2024\)](#), who discovered unstable and high inflation rates in Nigeria. For example, the price of a road construction materials per 20 tons in the third quarter of 2023 was NGN854,375 and increased to NGN2,008,330 in the first quarter of 2024. Thus, inflation is a major issue that causes building cost overruns and may lead to abandonment if not well managed ([Musarat et al., 2020](#)). These issues have not assisted affordable housing provision in slum locations and may have enhanced alleged unethical practices associated with past housing programmes ([Ndukwe, 2019; Uddin and Rahman, 2023](#)).

Regarding sensitisation of basic ways to manage infectious diseases and improving awareness of basic hygiene in low-income locations, findings reveal that slum locations are unhealthy locations with high risks of infection ([Figures 7 and 8](#)), especially infectious or contagious diseases (P11 to P15). There is a need for regular sensitisation by the relevant agencies, including health and safety NGOs, to prevent or mitigate the spread of infectious diseases. Findings agree with [Ezeh et al. \(2016\)](#), who found that basic needs such as pipe-borne water at a reasonable price, sanitation, acceptable living space, etc., are missing in slum locations. Participants (P12 - P15) emphasise that slum locations are breeding grounds for vectors and parasites of diseases (refer to [Figures 3, 4 and 8](#)). Hence, basic hygiene awareness is critical to preventing or managing any foreseen crisis and, by extension, improving Goal 3. Findings suggest special health attention for slum residents to improve the achievement of UNSDGs and the NUA. Also, the role of government, including incentives for local production of building materials, supporting rent-to-own schemes, provision of basic infrastructure in sub-urban locations, and developing a sustainable institutional framework for low-income earner affordable housing, findings agree with [Phang \(2018\)](#) and [Moore \(2019\)](#). [Phang \(2018\)](#) argued that government is always on the frontline for pro-masses programmes for countries with evidence of success in affordable housing delivery ([Ebekozién et al., 2021](#)), for example, Austria, Hong Kong and Singapore. [Moore \(2019\)](#) asserted that the political will to resolve the housing crisis should be unwavering through integrated housing development programmes. It will induce private investors and NGOs to invest and finance housing acquisition for low-income earners, including the regeneration of urban slum locations. The government's "political will" should cut across pro-low-income earners' housing policy and regulation, downward review of MPR, eligibility of housing loans with relaxed conditions, provide basic infrastructure in sub-urban locations, plans to upgrade slum locations and relocate residents to habitable homes, etc. These measures will enhance affordable housing in urban locations, eliminate or mitigate the spread of infectious diseases, and, by extension, improve good health and well-being (Goal 3).

6. Limitations and areas for further research

This study has limitations. The researchers adopted a qualitative method and covered five cities with 40 participants. The study adopted an in-depth review of the extant literature and had a good representation of the covered areas to mitigate the impact of the methodology adopted. Concerning future studies, future researchers could use the research method in other countries with the same urban slum issues. Also, to examine how it can be used to improve the

achievement of Goal 3. Also, further research could generate and validate dimensions/items for new variables, such as the political will to address affordable housing programme, a pro-employment programme for low-income earners, upgrading slums for low-income earners, urban land subsidy to improve self-help schemes and downward review of MPR to address hyperinflation. Also, wider coverage is encouraged for future studies to validate this study's results.

7. Conclusion and recommendations

As the world is approaching Agenda 2030 (UNSDGs), knowing that urban slum locations, poverty and health have a relationship and are fast increasing, especially in developing countries, it is pertinent to proffer solutions because the time limit is fast forthcoming. This study explored the issues and proffered suggestions to improve affordable housing provision in slum locations and, by extension, improve mitigating infectious diseases and achieving Goal 3. This study's findings show that contamination of the environment (slum locations or informal settlements) is a breeding ground for infectious diseases. This threatens the achievement of Goal 3, as evidenced across the five cities covered. As part of the study's implications, the role of the Public Interest Theory of Regulation in supporting the proposed framework (Figure 1) cannot be over-emphasised. The theory supports the public interest (masses) first before others in any decision-making through legislating and regulating with viable policies and programmes to prevent or mitigate hindrances to affordable housing provision and, by extension, improve the health and well-being of the inhabitant because of the hygiene associated with adequate housing environment, as displaced in this study. This study proffered ways to prevent or mitigate the spread of infectious diseases through providing affordable housing in slum locations and, by extension, improving the achievement of Goal 3. Scarcity of land in urban locations, high rate of unemployment, high cost of housing components, hyperinflation, fuel subsidy removal, foreign exchange float, lax slum housing upgrading programmes, lack of national housing database, inadequate housing funding and inadequate affordable housing policy emerged as the main issues facing affordable housing provision in Nigeria's slum locations. These are threats to Goal 3.

Hence, this study offered measures for improving affordable housing and, by extension, preventing or mitigating infectious diseases and improving the achievement of Goal 3 as follows:

- (1) A multi-mechanism is essential to correct the damage caused by urban slums, especially in cities in developing countries. Therefore, the government's role is pertinent and should be unwavering, given the long-term investment associated with housing assets. Also, collaboration and cooperation should be embraced by the federal, state, private sector and community to enhance affordable housing delivery and eliminate slum locations in Nigerian cities. Hence, a sustainable institutional framework with policy and programme tailored towards pro-poor urban low-income earners cannot be overstated.
- (2) The monitoring and controlling of fiscal and monetary policy are critical because of their impact on inflation rates, building materials costs and accessibility to loans for manufacturing. This study recommends a lower MPR to woo international and local investors and improve local production of alternative building materials. The CBN should overhaul policy and tailor it to motivate local building manufacturers, including controlling the exchange rate instability.
- (3) Third, the issue of slum regeneration is a welcome development and would enhance UNSDGs and NUA. Besides, slum regeneration would elevate dominant deteriorated urban locations towards achieving the UNSDGs, and it tackles society's socio-economic problems to reduce the environmental impacts.

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Appendix

Semi-structured interview questions

Basic questions for the participants

- (1) What is your organisation’s name and location?
- (2) What is your position in the organisation?
- (3) Please tell us your years of work experience.
- (4) Are you knowledgeable regarding affordable housing, infectious diseases, and SDG 3?
- (5) What are the issues facing Nigeria’s affordable housing provision in slum locations?
- (6) What do you think are the main causes of slums in Nigerian cities?
- (7) Can affordable housing provision prevent or mitigate infectious disease spread?
- (8) If yes to question 7, how?
- (9) If no to question 7, why?
- (10) Is there any relationship between mitigating infectious diseases and good health and well-being?
- (11) If yes to question 10, what is the relationship?
- (12) If no to question 10, why do you think so?
- (13) Can you suggest measures to improve affordable housing provision as a panacea to mitigating infectious diseases and, by extension, improve achieving Goal 3 in Nigerian cities?

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