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Bridging Trust and Collaborative Research in Low-Income Contexts During Public Health Emergencies: A Sierra Leone Case Study

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ABSTRACT

Background/Aims: The COVID-19 pandemic has highlighted the critical role of community-centered research in addressing public health challenges, particularly in low-income settings. This study examines the experiences of conducting a mixed-methods COVID-19 vaccine uptake study among healthcare workers in Sierra Leone—a country with a history of infectious disease outbreaks and a fragile healthcare system.

Methods: Twenty-four (24) in-depth qualitative interviews and 1,001 healthcare workers across six districts completed a 109-item quantitative survey. Thematic analysis was conducted for the qualitative data, while the online survey data were analyzed in Stata for descriptive and inferential statistics.

Results: The qualitative results showcased how direct researcher-community interactions encouraged participation, even without financial incentives. Conversely, the quantitative results uncovered mistrust and limited engagement, mitigated primarily through financial incentives and active stakeholder involvement. Integrating these research methods provided a comprehensive understanding of the factors influencing vaccine uptake and the broader research process.

Conclusion: The paper yields practical insights into navigating community-based research's complexities amid a global pandemic. The results offer critical insights into pandemic preparedness and equity-informed methodologies for global health researchers and public health practitioners working in low-income settings. Community engagement and trust-building were core elements of vaccine uptake research. This case study contributes to the global health research discourse by emphasizing the need for locally adaptable research methodologies amid a public health emergency.

1 | Introduction

Historically, community-based research has been underemphasized in low-income settings, especially during a global pandemic [1]. While this trend is rapidly changing, community-based practices that require intentionally engaging participants in public health emergencies remain relatively new. In low-income settings such as West Africa, the absence of community-based research practices can often be attributed to a lack of awareness, distrust, inconvenience, and confidentiality concerns [2]. The history of oppression and exploitation by developed countries, both during colonial times and more recently in the context of mineral resources, means that current research efforts are often met with the suspicion that the activities will not have a direct

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positive impact on participating communities [3]. Moreover, the current research infrastructure in such regions does not have robust ethical oversight to protect participants' confidentiality, which is essential to good community-based practices [4–7].

Community engagement enhances the quality and relevance of research by incorporating local knowledge and perspectives [8]. This collaborative process can lead to developing research questions and methods more aligned with the community's needs, increasing the likelihood that the findings will be meaningful and contextually relevant [9]. Community input can also improve the design and delivery of interventions, making them more socially appropriate and effective [10, 11]. Moreover, community engagement can facilitate access to participants and improve recruitment and retention rates, thereby enhancing the reliability and validity of research findings [12]. Therefore, community engagement is critical in research within low-income settings, offering a pathway to more ethical, relevant, and impactful scientific inquiry [13].

Community-based research has played a pivotal role in previous pandemics, demonstrating its value in fostering trust, improving health outcomes, and enhancing intervention efficacy, particularly in low-income settings [9, 14, 15]. For instance, community-based participatory research (CBPR) has been successfully used in human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) interventions to improve adherence to treatment and address stigma in resource-constrained settings [16]. Similarly, during the Ebola crisis in West Africa, community mobilization efforts proved essential in countering misinformation, reducing transmission, and increasing acceptance of containment measures [17]. More recently, research on 2019 coronavirus disease (COVID-19) vaccine uptake has highlighted how integrating community perspectives can mitigate vaccine hesitancy and enhance public health interventions [18, 19]. Despite these documented successes, a limited body of literature on integrating community-based methodologies in pandemic research involving healthcare workers in low-resource settings remains.

Community-based approaches, therefore, bridge the gap between researchers and communities, ensuring that research is conducted with, for, and by the people it aims to serve [11, 20]. This manuscript examines the experiences of conducting research during the COVID-19 pandemic among healthcare workers in a region with a history of infectious disease outbreaks, including Ebola. It critically evaluates the impact of limited community-based participatory practices, which sometimes impede informed decision-making and undermine meaningful engagement and robust participation during a global health crisis. This study's novelty lies in its timing, context, and unique practical experiences addressing this critical gap in research and practice. Although health research studies are ongoing in the region, insights into the research methodologies and practicalities are rarely shared with broader audiences.

1.1 | The Sierra Leone COVID-19 Research Adaptations Among Healthcare Workers

Drawing upon insights gained from prior research on COVID-19 among college students, African American communities, and international students in Missouri, USA, the lead researcher was motivated to broaden the scope of existing literature on global health [21–23]. These initial research studies investigated how diverse groups navigated the pandemic, unveiling a rich array of resilience and community responses. The findings, therefore, inspired a comparative inquiry into the experiences of populations in low-income settings [24, 25]. Sierra Leone emerged as a focal point of this study enterprise because of its distinctive history of infectious disease outbreaks such as cholera, measles, Lassa fever, and Ebola. The research's novelty was further shaped by the lead researcher's experience as a frontline physician during the 2014 Ebola outbreak in Sierra Leone. Their work in disease surveillance highlighted the critical role of community-based practices in disease control. Navigating the complexities of health promotion, community trust, and collaborative action during the outbreak deepened their understanding of how public health interventions intersect with local engagement, further informing their approach to global health research. These experiences profoundly influenced the lead researcher's professional trajectory, instilling a lasting commitment to global health equity and preparedness for public health emergencies. Thus, the lead researcher sought to enrich the global health discourse by drawing parallels and lessons from the region's historical encounters with infectious disease outbreaks, leveraging their experiences as a medical doctor in the region. They, therefore, proposed a community-based research study that explored healthcare workers' experiences during the COVID-19 pandemic in Sierra Leone.

2 | Methods

2.1 | Study Design

The COVID-19 perspective study employed an exploratory sequential mixed-method design, consisting of a qualitative phase with 24 participants and a quantitative phase involving 1001 respondents (see Tables 1 and 2 for participant demographics).

Qualitative Phase: The lead researcher conducted this portion of the study between February and June 2022 and involved participant recruitment from three districts in Sierra Leone—Freetown, Kenema, and Makeni. These districts were among the most severely impacted by the 2014 Ebola outbreak, which resulted in 3956 fatalities across the country [26, 27]. Purposive and snowball sampling strategies relied on the lead researcher's engagement with regional healthcare workers to identify prospective participants. The lead researcher's prior community-based activities with these groups and familiarity with the healthcare workers and system, stemming from their work in the region during the Ebola outbreak, made recruitment less challenging. The qualitative data analyzed using ATLAS. ti software, provided essential contextual insights into healthcare workers' experiences with COVID-19, their prevention behaviors, and vaccine uptake, offering a deeper exploration of the facilitators and barriers influencing these practices. This information, which was not readily available in the region then, was critical for understanding the nuanced social, institutional, and structural factors that shaped healthcare workers' responses—insights that could not be fully captured through quantitative measures alone.

TABLE 1 | Participant demographics (Qualitative phase).

Participant demographics	N(24)	%
Gender		
Female	17	70.8
Male	7	29.2
Age range		
18–25 years	1	4.2
26–32 years	5	20.8
33–39 years	15	62.5
40–50 years	2	8.3
50+ years	1	4.2
Marital status		
Single (never married)	9	37.5
Married	12	50
Widow	2	8.3
Single (divorced)	1	4.2
Health worker designation		
Nurse	18	75
Doctor	4	16.7
Hygienist	1	4.2
Community Health Officer	1	4.2
Work location		
Freetown	9	37.5
Kenema	8	33.3
Makeni	7	29.2
Years of experience		
1–3 years	3	12.5
4–6 years	2	8.3
7–9 years	12	50
> 9 years	7	29.2
COVID-19 vaccination status		
Vaccinated	21	87.5
Unvaccinated	3	12.5

TABLE 2 | Participant demographic characteristics (Quantitative phase).

Participant demographics	No.	%
Age		
18–25	268	26.8
26–33	350	35.0
34–40	209	20.9
Above 40	174	17.4
Total	1,001	100.0
Gender		
Female	469	46.9
Male	531	53.1
Total	1,000	100.0
Education		
Less than college	249	25.2
At least college	741	74.8
Total	990	100.0
Work location		
Freetown	377	38.7
Makeni	171	17.5
Kenema	75	7.7
Port Loko	103	10.6
Bo	111	11.4
Magburaka	49	5.0
Other	89	9.1
Total	975	100.0
Years of experience		
Less than 1 year	208	23.7
1–3 years	289	32.9
4– 5 years	153	17.4
6–10 years	150	17.1
More than 10 years	79	9.0
Total	879	100.0
COVID vaccine uptake		
No	185	18.8
Yes	801	81.2
Total	986	100.0

Quantitative Phase: This portion of the study, conducted in October 2022, aimed to complement the qualitative findings by determining the prevalence of themes identified from the in-depth interviews and providing findings with broader applicability. Hence, this phase addressed specific research questions that the qualitative approach explored, such as the associations between attitudes towards COVID-19 prevention measures, experiences of the Ebola outbreak, and COVID-19 vaccine uptake, as well as the relationship between attitudes towards other vaccines and the uptake of the COVID-19 vaccine. A non-probability sampling approach was used for recruitment, which meant it relied heavily on disseminating information about the study via social media groups among healthcare workers. Individuals who participated in the qualitative phase were not excluded from the quantitative phase or tracked for subsequent participation. This broader sample of healthcare workers included six districts—encompassing the initial three districts where the qualitative study was conducted and three additional districts with the highest recorded COVID-19 cases in Sierra Leone. These broader perspectives enhanced the study's generalizability. The data from this phase was collected using REDCap and subsequently exported to Stata 18 for analysis. Ethical approval was obtained from the lead author's institutional review board (IRB # 2079762) and the Sierra Leone Ethics Committee (SLESRC# 013/10/2022). Informed consent was obtained from all study participants. This study was conducted based on the principles of the Declaration of Helsinki [28].

2.2 | Adapting to the Local Context

During the qualitative phase of this study, six in-depth interviews were initially conducted in Freetown in early February 2022, utilizing a semi-structured questionnaire tool that reflected the study's broader research questions rather than the specific local context. Following these interviews, unanticipated insights related to topics not covered in the original questionnaire guide emerged, leading to meaningful modifications in the research tool. These revisions were designed to delve deeper into the emergent local themes that participants had brought up, such as institutional perspectives on COVID-19, the vaccine, and the influence of gender on the workplace experiences of healthcare workers during the pandemic. Moreover, the updates to the questionnaire also considered the shifting global conversation about COVID-19 vaccines, with a particular focus on COVID-19 vaccine booster doses that were not widely discussed in the initial interviews. The semi-structured questionnaire was thus suitably adapted to include these tailored nuances based on the participant's narratives, ensuring a more contextual and relevant data collection tool for the remaining interviews that continued through June and July of 2022.

Upon completing the qualitative phase, the preliminary findings from the in-depth interviews informed the design of an online survey tool launched in October 2022. The online survey tool, adapted from the Center for Disease Control and Prevention (CDC) Vaccine Confidence Survey, had to be modified to fit the local context (see appendix for the study tool). It was quickly evident from the qualitative findings that some variables were less applicable [29, 30]. These adaptations involved substituting variables like racial categories and medical insurance coverage, which the lead researcher deemed less relevant in the study context based on insights from the qualitative research. Conversely, variables such as religion and access to vaccine distribution facilities were thought to be highly relevant. Consequently, the development of the online survey tool was significantly informed by the insights shared by healthcare workers during in-depth interviews.

3 | Results

3.1 | Community-Based Practice Feasibilities

Valuable insights were gained that underscored the principles of community-based practices in a public health emergency. Firstly, healthcare workers were willing to participate in in-depth interviews (qualitative phase), even without incentives, likely due to the lead researcher's engagement with the community. Secondly, recruitment based on senior hospital leadership's recommendations in one of the three districts yielded participants with extensive experience and knowledge of COVID-19. These individuals also demonstrated strong motivation to contribute to solutions for managing the outbreak. However, these observations are not without bias because most were senior nurses who had experience working through multiple disease outbreaks. While the senior nurses' experiences enriched the study data, their predominance in the recruitment pool resulted in a missed opportunity to capture the perspectives of less experienced healthcare workers. As a result, a more equitable community-based strategy was employed in the subsequent two districts to mitigate this bias, with the lead researcher personally engaging and recruiting healthcare workers at various hospital units. This adjustment diversified the study sample and controlled for the bias observed in the first district. However, it also resulted in most participants coming from the isolation, triage, emergency, and pediatric hospital units, where interest in participation was particularly high. Consequently, data saturation was reached before extending the study to other hospital units, potentially leading to a homogeneity of perspectives on COVID-19 among participants due to their similar work environments.

The quantitative data collection revealed notable challenges as the lead researcher was not physically present in the region when during this phase (see Table 2 for participant demographics). Firstly, the lead researcher could not conduct random selection due to the limitations of hospital databases, which either needed complete staff contact information or up-to-date records. Secondly, the initial phase of distributing the survey link through healthcare workers' social media groups resulted in low participation rates. The legacy of perceived distrust toward foreign-based community development practitioners and researchers in sub-Saharan Africa may have further compounded trust issues [31, 32]. Notably, acquiring mobile data bundles for internet-based activities, such as participating in online surveys, incurs a financial cost for participants, which may not always be affordable. The survey link was also distributed without the lead researcher's physical presence, limiting direct engagement opportunities between the researcher and the participants. However, the research compensation disbursement triggered a notable participation surge, necessitating an early survey closure due to budgetary constraints. The survey experienced a high rate of incomplete responses, with a completion rate of only 49% out of 2060 attempts, particularly during the first 4 days after its launch. This was partly attributed to an initial survey setting that prevented participants from resuming their responses if they were interrupted mid-way, an issue that was promptly addressed once identified. The survey required approximately 5 to 7 min to complete, a duration that might have contributed to the rate of incomplete responses, as it was not particularly brief.

3.2 | The Role of Community Stakeholders in Research Participation

The online survey's dissemination also encountered unique challenges. In some instances, facility heads were reluctant to aid with survey link distribution as they sought more involvement and acknowledgment in the study. For example, the head of one facility preferred to be involved in the research planning process, suggesting that such participation would have made them more comfortable rather than being approached to assist with distributing the research tool. Additionally, another senior medical doctor at a district hospital showed reluctance to interact with the lead researcher despite numerous attempts to reach them through phone calls and text messages over 2 weeks. They did not provide a reason for hesitation but consistently mentioned their busy schedule whenever they answered the phone. In other cases, healthcare workers hesitated to share the survey link without the permission of senior facility heads, despite approval from the Sierra Leone ethics committee.

They were concerned about potential criticism from facility heads if it was discovered that they had assisted in distributing the survey tool, reflecting a lack of awareness about the ethical autonomy to participate in research studies without repercussions from workplace superiors. Faced with these challenges, it became necessary to adopt more direct strategies, such as identifying contacts and the subsequent outreach to individual clinical unit leads at different health facilities via calls and text messages. This approach aimed to engage healthcare workers to distribute the survey more effectively without in-person interaction.

3.3 | Practical Lessons Learned

The study highlights the importance of adapting research methodologies with community-based practices to suit the local context and overcoming the unique challenges of conducting research in low-resource settings. Achieving meaningful community engagement in research within low-income settings is often challenging, as studies on this topic frequently report varying levels of community participation [33]. This is particularly important because, even after experiencing two pandemics, many unknown factors and suspicions about ailments and treatment options persist in the region [34, 35].

The mixed-method approach and the adaptation of tools initially designed for high-income contexts reinforce the need for contextual sensitivity in research. For instance, questions related to personal or sensitive topics such as gender identity and sexual orientation had to be omitted to ensure comfort and increased participation rates. The challenges in applying standardized tools developed in high-income countries to low-income settings were evident. This necessitated a modification of the research tools to ensure they were relevant and appropriate for the local context, emphasizing the need for cultural and contextual adaptability in global health research [36].

A key observation was the willingness of healthcare workers to participate in qualitative research without incentives. This contradicts common assumptions that financial incentives are necessary for participant recruitment in low-income settings [37, 38]. However, it also raises questions about the intrinsic motivations of healthcare workers in such contexts and their eagerness to contribute to knowledge that could improve health outcomes in their communities, which requires further investigation and research. Overall, this willingness to discuss resonates with an underlying desire among local communities for platforms to discuss and share their experiences.

Conversely, the challenges with distributing the online survey and the initial low response rates highlight the complexities of conducting research in settings with historical mistrust towards foreign-based practitioners and researchers [31]. This emphasizes the importance of considering the implications of remote data collection on participant-researcher interaction and its potential impact on the depth and quality of the responses gathered [39]. The spike in response rates following the commencement of participant compensations reflects the impact of financial incentives and the importance of establishing trust and demonstrating a commitment to ethical research practices [40].

The reluctance of some facility managers to share the survey link also sheds light on the importance of early use of community-based practice, such as community stakeholder engagement, in developing the study to increase local buy-in into the research that would have facilitated smooth data collection [41]. Therefore, intentionally adopting more community-based practices that allow ample fieldwork time is crucial to effectively implement processes where participants and community stakeholders are engaged equally and meaningfully.

4 | Discussion

The experiences from this study study in Sierra Leone provide critical insights into conducting health research in low-income settings, particularly during a global health crisis like the COVID-19 pandemic. The community-based recruitment strategy employed for the qualitative phase significantly impacted the participants' diversity. Although recruiting through senior hospital leadership yielded experienced participants, it introduced a selection bias, limiting the representation of junior healthcare workers. While monitoring the recruitment process, the community-based practices employed by the lead researcher allow the study to pivot towards recruiting directly from hospital units, such as triage, in subsequent phases, providing a more balanced perspective. This highlights the importance of flexibility in community-based research, allowing diverse recruitment strategies to capture a comprehensive view of participants' attitudes and experiences without compromising research integrity [41].

The lead researcher's decision to exclude stakeholders in the preparation phase of the online survey was driven by a desire to focus on major themes from the qualitative study while minimizing the potential for participants to perceive the research as an audit of their workplace practices. However, a key lesson learned was the healthcare worker community's request for earlier involvement in the research process, which aligns with the principles of community-based participatory research (CBPR) [42]. This promising insight for low-income settings indicates that CBPR can be effective in such environments and that community members value being included in local research activities. It also aligns with Majee and Wegner [43] South African study findings, suggesting that individuals in low-resourced settings are eager to engage in meaningful dialogue and contribute their perspectives to the broader discourse when appropriate community-based practices are adopted. This enthusiasm for involvement demonstrates a readiness to participate in research activities and a wider desire to be heard and to actively contribute to shaping responses to health crises and other significant issues within their communities.

The study on COVID-19 vaccine uptake in Sierra Leone provides a compelling case for examining the nuances of qualitative and quantitative approaches in community engagement. The overall nuances from this study could be summarized as follows.

4.1 | Qualitative Insights

The qualitative phase benefited from direct participant engagement, leveraging the lead researcher's established community relationships. This approach fostered trust and willingness among healthcare workers to participate without incentives, highlighting the value of personal connections and community familiarity in research. Therefore, the qualitative phase of the study was successful in three ways: fostering contextual richness of the data, ensuring flexibility, and providing a holistic understanding of the research topic.

1. Contextual Richness: Using qualitative methods allowed the lead researcher to immerse himself in the community, cultivating trust and rapport with participants. The study gained nuanced insights into vaccine hesitancy, cultural beliefs, and barriers to acceptance by conducting face-to-face interviews.
2. Flexibility: The qualitative approach helped adapt to the local context. The researcher explored unexpected themes, probed deeper, and modified interview prompts based on participants' responses. This flexibility enhances the depth of findings.
3. Holistic Understanding: Employing open-ended questions, the study went beyond merely documenting individual experiences related to COVID-19 to uncover broader community and institutional viewpoints. It sheds light on the underlying social determinants of health, historical mistrust in healthcare systems, and the significant influence of conspiracy theories and misinformation on public perception and behavior. This comprehensive approach provided a multifaceted understanding of the pandemic's impact, highlighting the complex interplay between personal experiences and the wider societal and institutional context.

However, the qualitative study had challenges, including intensive resource demands and the need for measures to minimize subjectivity and researcher bias.

1. Resource-Intensive: The qualitative data collection demanded time, a skilled interviewer, and local language proficiency. Allocating resources for extensive fieldwork was particularly challenging.
2. Subjectivity: Interpretation of qualitative data relied on researchers' judgment. Ensuring rigor through triangulation and reflexivity was, therefore, essential. Hence, the researcher conducted the interviews until saturation was reached, noting how participants described their experiences similarly and differently.

To circumvent the challenges associated with using multiple interviewers in qualitative studies, the lead researcher opted to lead all 24 interviews. This approach aimed to reduce variability in data collection strategies, minimize bias, and streamline the data analysis process, thereby maintaining the quality and coherence of the collected data.

4.2 | Quantitative Insights

The quantitative phase offered a wider lens that was more representative of healthcare workers' regional experiences. It also allowed the researchers to make statistical inferences to answer the study's research questions. This study's quantitative design had three benefits: objectivity and replicability, generalizability, and efficiency.

1. Objectivity and Replicability: The quantitative method provided standardized data that can be analyzed objectively. The online surveys yielded consistent responses, enabling its replication among healthcare workers in other parts of the country.
2. Generalizability: The large sample size (completed responses = 1001) allowed for generalizing findings to broader healthcare worker populations, especially as the statistical analysis provided robust evidence on associations among the key variables.
3. Efficiency: The online survey recruited a wide range of participants in a less time-consuming manner; hence, the maximum participation was reached within 3 weeks.

Conversely, the challenges were evident. Stakeholder involvement—particularly from hospital leadership and senior health workers, who were trusted and had the platforms to disseminate survey tools—was more critical in this phase than in the qualitative phase. The challenges of the quantitative phase of this study include the need for Hierarchical approvals, mistrust, limited contextual depths, and a potential social desirability bias in reporting COVID-19 prevention behaviors and vaccine uptake practices.

1. Hierarchical Approvals: Seeking supervisor permission before participating or distributing the online survey link introduced an added layer of bureaucracy that needed to be envisioned. While this was considered necessary for ethical reasons, it delayed data collection in some regions.
2. Mistrust: The low participation rates observed before initiating incentive payments imply a potential distrust in the researchers' consent information, specifically regarding the promise of incentives to be provided about 2 weeks after completing the online survey. Once the timeline for receiving compensation was shortened, participation rates increased significantly. At the time of data collection, healthcare workers were still owed risk allowances promised by local health authorities for exposure risk while working during the pandemic. As a result, hesitancy in trusting the promised incentives may not have been entirely unfounded. Additionally, mistrust likely stemmed from skepticism about the study's motives despite the detailed information provided in the consent document. In the region, health research is often perceived as yielding significant financial benefits for research teams, which may have contributed to the study being viewed as another profit-driven endeavor.
3. Limited Contextual Depth: The quantitative data lacked the richness of qualitative narratives as it could not adequately capture the "why" behind numerical trends.
4. Response Bias: Participants might have offered responses they deemed socially acceptable or inaccurately reported their attitudes and practices regarding COVID-19 prevention. This consideration was especially pertinent given that the study's participants were healthcare workers. Being acutely aware of their expected knowledge and

> leadership in adhering to infection prevention and control principles, they may have felt compelled to present themselves consistently with these expectations.

The use of mixed methods in this study was crucial to negotiate the drawbacks of each method while benefiting from their strengths. While both approaches are essential, they must be thoughtfully integrated, respecting the local context and fostering genuine community partnerships to advance public health research in low-income settings. In low-resource settings, researchers must strike a balance. Integrating qualitative insights with quantitative rigor ensures comprehensive findings. Community engagement remained pivotal, even when seeking supervisor approvals. By combining the strengths of both approaches, public health research can be advanced while respecting local contexts. Our study highlights the symbiotic relationship between qualitative and quantitative methods, emphasizing their complementary roles in generating robust evidence. Researchers must navigate these complexities thoughtfully, recognizing that community-based practices enhance the validity and relevance of research outcomes. The lessons learned from the COVID-19 perspective study in Sierra Leone are relevant for the context of COVID-19 research and applicable to broader health research endeavors in similar settings. Researcher engagement with the study population is crucial as it negates the potential for incentives to be a priority. These experiences, while unique to the study, are likely similar to challenges faced by other research projects in the region. Sharing how these challenges were navigated is crucial, as it provides insights into conducting effective and respectful research in low-income settings, particularly during a health crisis.

5 | Implications for Future Research

The experiences from this study offer valuable lessons for future research in similar contexts and circumstances. Firstly, it is crucial to establish trust and explicit engagement with participants, especially in low-resource settings. Hence, offering incentives to participants becomes crucial to encouraging research participation only in the absence of community engagement. Secondly, local stakeholder involvement in research efforts is essential to recruitment and retention success. Thirdly, research tools and methodologies must be adaptable to local contexts, considering the participants' cultural, social, and economic realities. Finally, diverse recruitment strategies are essential to ensure the representation of varied perspectives within the study population. A thorough consideration of these aspects significantly enhances the likelihood of research studies in low-resource settings, particularly during global health crises, to successfully overcome challenges, build trust within communities, and achieve their objectives. Effective stakeholder engagement and the adoption of tailored approaches, including diverse recruitment strategies, ensure cultural relevance, promote inclusivity, and improve the quality and impact of research findings.

6 | Conclusion

Conducting research in low-income settings, especially during a health crisis such as a global pandemic, requires a nuanced approach that respects the local context, addresses logistical and ethical challenges, and is sensitive to the historical and cultural dynamics of the study population. By integrating local knowledge and fostering trust between researchers and study populations, these approaches enhance data quality, improve study participation, and mitigate ethical concerns related to informed consent and confidentiality. Community-driven research designs can also address historical mistrust in medical research, ensuring that studies are conducted with, rather than on, local populations. Moving forward, global health research must prioritize equitable collaborations that empower local researchers and communities, ensuring that knowledge production is inclusive and sustainable.

Author Contributions

Ifeolu David: conceptualization, data curation, methodology, investigation, software, validation, funding acquisition, resources, project administration, writing – review and editing, writing – original draft, formal analysis. **Rohan D. Jeremiah:** formal analysis, supervision, validation, writing – review and editing.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

No datasets were directly used in this manuscript. However, the lead author is willing to share data from the study upon request, subject to the completion of a data-sharing agreement.

Transparency Statement

The lead author Ifeolu David affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.