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Strengthening the effectiveness of community health system: Assessing the factors that enhance or constrain the delivery of health services within communities in Nigeria

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Abstract

Introduction Sub-optimal community health service delivery (CHSD) has been a challenge constraining community health systems (CHS) globally, especially in developing countries such as Nigeria. This paper examined the key factors that either enhance or constrain CHSD in Nigeria at the individual, community/facility and governmental levels while recommending evidence-based solutions for sustaining and improving CHSD within the framework of CHS.

Methods Data were collected through a qualitative study undertaken in three states (Anambra, Akwa-Ibom and Kano) in Nigeria. Respondents were formal/informal health providers, community leaders and representatives of civil society organizations all purposively sampled. There were 90 in-depth interviews and 12 focus group discussions, which were audio-recorded, transcribed verbatim and analysed thematically using codes to identify key themes.

Results Factors constraining community health service delivery at the individual level were poor health-seeking behaviour, preference for quacks and male dominance of service delivery; at the community/facility level were superstitious/cultural beliefs and poor attitude of facility workers; at the governmental level were inadequate financial support, embezzlement of funds and inadequate social amenities. Conversely, the enabling factors at the individual level were community members' participation and the compassionate attitude of informal providers. At the community and facility levels, the factors that enhanced service delivery were synergy between formal and informal providers and support from community-based organizations and structures. At the governmental level, the enhancing factors were the government's support of community-based formal/informal providers and a clear line of communication.

Conclusions Community health service delivery through a functional community-health system can improve overall health systems strengthening and lead to improved community health. Policy-makers should integrate community health service delivery in all program implementation and ultimately work with the community health system as a veritable platform for effective community health service delivery.

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Keywords Community health service delivery, Community health systems, Universal health coverage, Multisectoral collaboration

Introduction

Poor community healthcare service delivery (CHSD) has adverse effects on both the individual and the economy of the state [1, 2], while improved community healthcare service delivery has been shown to relate to more productivity in people [3]. Therefore, ensuring an efficient community health service delivery has implications for not only improving the health of the citizens but also the economy of the country. Achieving universal health coverage (UHC) and the Sustainable Development Goals (SDGs), for any country relies on the effectiveness of the country's health service delivery to its communities; this effectiveness is dependent on how well factors that constrain and enhance health service delivery are identified, addressed and sustained [4, 5]. The promotion of effective community health service delivery that would enhance the community health system in Nigeria has been a key policy objective of the Nigerian government, as contained in the Nigerian 2016 National Health Policy document [6]. This is because ensuring an efficient community health system has been a major global issue for countries across the globe [7, 8]. According to the Nigerian 2016 National Health Policy document, the improvement of health service delivery at the community level has been identified as one of the key strategies for improving community health systems (CHS). Although there is no consensus for defining the concept of community health system because it is still evolving, Schneider and Lehmann in 2016 defined it as the set of local actors, relationships and processes engaged in producing, advocating for and supporting health in communities and households outside of, but existing in relationship to, formal health structures [9]. Secondly, Nigeria has not yet formally defined a community health system outside of the primary healthcare (PHC) system but, on occasions, has used these terms interchangeably [30]. However, some authors have also framed the CHS as the space between the "local health system" and the community, filled by the community health workers, who form a critical component of the CHS, acting as service extenders, cultural brokers and social change agents, extending health services to households [36–39]. It has also been conceptualized as the "grey zone" between the public health system, non-governmental organizations (NGO) and the private health system [40, 41].

In this study, the authors a conceptualize community health system to refer to the actors (and their actions and relationships) in the formal and informal sectors found within the Nigerian local communities that influence healthcare service provision, utilization and advocacy. This includes, but is not limited to, actors such as the ward development committee (WDC), community security personnel, bonesetters, herbalists, traditional birth attendants (TBA), patent medicine vendors (PMVs) and formal actors such as the PHC centres and other facilities that provide formal healthcare services in the communities, such as the health posts. The concept within the Nigerian context also captures the intricate relationships and processes that may exist between these actors that influence the quality of healthcare service provision for the communities they serve.

Nigeria established the PHC system in 1976, which designated the local government areas (LGAs), the second smallest administrative level in the country, the responsibility of managing and implementing health services at the community level [30]. Subsequently, the National Primary Health Care Development Agency (NPHCDA) was established in 1992 to ensure the sustainability of previous gains and better manage the PHC system in the country [33], with the agency revising the PHC system in 1993 [10]. Despite these efforts, it is regrettable to see Nigeria rank 157th out of 167 countries in a 2023 world health and health system ranking [11]. The CHS operates just below the PHC system but is intrinsically linked to it, and its optimal functionality is expected to help in improving the country's ranking amongst global health systems.

Studies have shown that the CHS in Nigeria has been deteriorating and needs to be enhanced as a way of improving the overall health system as well as boosting the country's health profile [12, 13]. This deterioration was attributed to a lack of adequate community health workers (CHWs) and a lack of re-training for the few available [13], poor female representation, poor collaboration with pre-existing community structures and hence poor community participation [12]. However, to improve community health system delivery in Nigeria within the construct of the CHS, it is important to assess the factors that constrain as well as promote healthcare service delivery at different levels across communities to mitigate the constraining factors while ensuring the sustenance of the promoting factors. Identifying and addressing the key factors that impede community health service delivery in Nigeria have strong implications for the improvement of CHS in the country as well as the attainment of the UHC and

SDGs. This paper examined the key factors that either enhance or constrain CHSD in Nigeria at the individual, community/facility and governmental levels while recommending evidence-based solutions for sustaining and improving CHSD within the concept of CHS. It is a portion of a larger study on improving health at the community level in Nigeria, towards UHC. The findings will be useful for decision-makers in relation to possible solutions to tap into the latent resources of communities, especially within the context of CHS to significantly improve community health.

Methods

Study area and design

This study was conducted in three states across three geopolitical zones in Nigeria, namely Akwa-Ibom (south-southern zone), Anambra (south-eastern zone) and Kano (located in the north-western region). The areas were purposively chosen to achieve a geographical representation of the country and ensure more spread of the result findings. Data were collected through face-to-face semi-structured interviews and focus group discussion (FGD) with open-ended questions and prompts from key informants. Purposive sampling was used to select two local governments areas (LGAs) in each of the three states. The sampled LGAs included one rural and one urban area. For Akwa-Ibom State, the urban LGA was Uyo, while the rural LGA was Itu. For Anambra State, the urban LGA was Awka South LGA, while the rural LGA was Aguata. For Kano State, the urban LGA was Nasarawa Local Government Area, while the rural LGA was Kumbotso. The purposive sampling technique was used to select respondents for the study. The factors considered in their identification and selection were their level of participation and involvement in health-related activities in the communities, their occupation, leadership roles and length of service to the community or the government. The respondents cut across different groups – policy-makers; civil society organizations (CSOs); non-governmental organizations (NGOs); traditional, religious and community leaders; community groups; formal health providers; and informal health providers. A total of 90 in-depth interviews (IDIs) and 12 focus group discussions (FGDs) were conducted (Table 1). Data were collected between October and November 2022.

Data analysis

The analysis followed a systematic approach, including familiarization with the data, coding, identification of themes and interpretation. Regular meetings were held to discuss the coding and resolve any discrepancies among the researchers. Analyses focused on exploring the factors that both encourage as well as hinder community health service delivery in three sub-themes or levels – individual, community/facility and governmental. The analysis process involved double-coding each of the transcripts to ensure the relevance and comprehensiveness of the findings.

Ethical considerations

Ethical approval for this study was obtained from the Health Research Ethics Committee of the University of Nigeria Teaching Hospital, Ituku-Ozalla Enugu State. Permission to conduct the study was sought and obtained from the respondents and traditional leaders of the communities. Written informed consents were obtained

Table 1 Summary of respondent categories and number of interviews

Respondent category	Akwa Ibom	Anambra	Kano
Health sector policy-makers	3	2	3
Health program managers	2	2	1
Formal healthcare providers	4	3	4
Informal healthcare providers	13	7	11
Intermediary health workers	–	–	3
Private health sector	–	4	–
CSO/NGO	2	4	3
Community or religious leader	7	5	7
FGD community groups/service users (women)	2	2	2
FGD community groups/service users (men)	2	2	2
Total (males)	*18*	*18*	*25*
Total (females)	*17*	*13*	*11*
Total per state	*35*	*31*	*36*
Grand total	102		

from all study participants after they had demonstrated an understanding of study procedures and voluntariness. The confidentiality of all the participants was assured and maintained during and after the study by assigning unique identifiers to each participant during data analysis and reporting.

Results

The result of the analysis is presented in two main themes which are factors that (1) enable or (2) constrain community health service delivery. Each of the main themes is further broken down into three sub-themes or levels: individual, community/facility and governmental.

Factors that promote CHSD

The following factors were found in the study to enhance community health service delivery at different levels:

Individual level

- Selfless participation of community members

We found that one of the factors encouraging health service delivery in the communities is community members' selfless participation in activities that improve CHSD. The members of the community were found to engage in personal activities such as carrying out sanitary activities in the primary healthcare centres as well as providing health equipment such as handwashes, gloves, etc., in a bid to improve the quality of health service provision in the communities. For example, a respondent in Kano State during the interview noted:

> *We carry out many services in the society like cleaning gutters and sweeping our surroundings, washing and disinfecting hospital, etc. All of this are done voluntarily by the people without expecting any payment at the end." [WDC member, Kano].*

Another respondent in Akwa Ibom noted:

In fact, it is the effort of ourselves that make things work here. The government is less concerned." [civil servant, Akwa Ibom)].

- Synergy between formal and informal providers with community members

At the individual level, informal providers expressed that they were in constant interaction with the formal providers to ensure adequate health service delivery for the community members. This interaction involves informal providers individually referring cases they cannot handle to formal providers to ensure maximum treatment output. The informal providers acknowledged that some cases they encounter are sometimes beyond them and that the best practice is to refer these immediately to the formal providers and that this has helped in ensuring adequate health service delivery output. While trying to buttress this point, a herbalist in Akwa Ibom noted:

> *Yes, I do refer some injuries that are beyond my ability to a health center because I believe there are some injuries that I can cure and others that I cannot and must refer to health centers. [herbalist, Akwa Ibom].*

- Compassionate attitude of informal providers

Another factor found to aid health service delivery in the communities at the individual level was the informal provider's compassion and willingness to help the patients at little or no cost. These providers noted that their priority is ensuring that the patients recover from their illness rather than making monetary gains. This ensured that the patients kept coming to receive services at a reduced rate. A bonesetter in Akwa Ibom in a bid to elucidate this noted:

> *I'm not sure, but according to information I received from one of the clients referred to me, he should pay the hospital 650,000 naira. I was also considerate with him, and I didn't take much from him because he was poor. I only charged him 130,000 naira because I was being considerate... the majority of them stay because I have a large house and I don't mind them staying until they finish their treatment, and while at my place, they feed themselves out of their pockets, while the majority of them come from their homes for their treatment and then return [bonesetter, Akwa Ibom, IDI].*

Another respondent in Kano recounts that, although the providers make little money from the job compared with the amount of work they do, it is the passion they have for the job that keeps them going. The respondent noted:

> *Most of them have passion for it because the little they get from it is really helping them [informal health worker, Kano].*

Community/facility level

- Synergy between formal and informal providers

At this level, a key factor we identified to be aiding health service delivery in the communities was cooperation between the formal and informal providers. Informal providers were found to cooperate with formal

providers to the extent of having a union in the community that serves to regulate their practices. In these meetings, it was found that they shared ideas about how to promote their services. The informal providers were also reported to help in preparing patients for the formal providers to administer treatments. One of the respondents during an interview in Kano while trying to elucidate this synergy among the providers said:

During disease outbreaks, our members help the health workers in managing patients, for instance, we help in moving patients to their respective wards, putting them on beds, and getting drips ready so that by the time the health worker comes to them all is set he/she is just going to start administering treatment... all the health workers in the hospital including the in-charge respect and give us their maximum cooperation [WDC member, Kano, IDI].

Another respondent in Kano noted:

As you can see we (TBAs) are in the antenatal station so we work with them [TBA, Kano, IDI].

An FGD respondent in Kano also added:

Yes, we have linkage and from the ward head up to the district head. We the VCM, normally hold a meeting every month with district heads, to discuss about the health-related problems and if there is need for further assistance the ward head will also report to district head. [volunteer community mobilizer, Kano].

- Support from community-based organizations and structures

Support from community-based organizations was also found to aid CHSD at the community/facility level. The existing community structures were found to facilitate the provision of service delivery through directly/indirectly influencing community participation or the provision of health service delivery. These community structures were: faith-based organizations (FBOs), ward development committees (WDC), health facility committees (HFCs) and broader community leadership. These groups were found to be involved in various health activities and other non-health activities in the communities, ranging from capital projects such as the erection of new health centres, after which they handed them over to the government to manage. They organize community empowerment programs, sensitization and health education activities through regular meetings, convening at community ceremonies such as weddings and church/mosque. For example, in one of the interviews in Kano, one of the respondents noted:

For us to achieve our objectives in the communities, we engage the services of the President Generals of the communities; [CHWs], Traditional leaders, faith-based organizations, the Market Women Association, the youths, etc... we normally draw the attention of the community representatives such as the TR, PG, youth leaders, market women leaders, etc. of the need to gather the community members for awareness creation [civil servant, Anambra, IDI].

Another respondent in Akwa Ibom noted:

The ward development committee has really helped to breach the gap between the community and the health facility so whatever you need to do in terms of mobilization and sensitization, they are always there, they help when we're planning for advocacy visits, anytime you call them they render their support [officer-in-charge1, Akwa Ibom, IDI].

Governmental level

- Government/partner's support to community-based formal and informal providers

At this level, the support from both government and non-governmental organizations to community-based formal and informal providers was seen to aid CHSD. For example, informal providers were trained, supported and incentivized by NGOs that provide formal services to identify and refer illness cases to a central facility for treatment in Kano. Also, the TBAs noted that they receive items such as gloves, cleaning agents, etc., from the local government health authorities as a way to support them in attending to cases within their capacities and incentivize them to make quick referrals to the formal providers. A respondent in Anambra noted:

My organization trained [CHWs] and community volunteers on how to handle compassion fatigue... Yes of course, we have to educate them on what to do in the community before they start, this will help to guide them against abuse" [medical doctor, NGO, Anambra, IDI].

Another respondent also said:

We organize training, we train the CORPs, we train the CVs – the community volunteers and the community resource persons [civil servant, Anambra, IDI].

Speaking during an FGD in Kano, a TBA reflects:

...we're really enjoying the training because the training is encouraging us, and like before most of the women, when they give birth at home they don't care to go to the hospital but now as a result of our work they do come to the hospital, and all happens as a result of the training, and all these are among our work, and now even giving birth at home is very rare... [TBA, Kano, R6, FGD].

- Clear line of communication

We also found that another factor that enhances CHSD at the governmental level is ensuring a clear line of communication among the health partners, the government and the community. This made it easy to ensure that interventions were directed to the right people. A respondent in Anambra during the IDI threw more light on this when the respondent said:

If any partner is coming to the state to support the state, for family planning programme, they will come through me. Then we go down to the LGAs. The LGA have the RA supervisor at the LGA level, and then we move down to the community, then we have facilities where we implement all these programmes" [civil servant, Anambra, IDI].

Factors that constrain CHSD

These factors were found to impede efficient community health service delivery at different levels.

Individual level

- Poor health-seeking behaviours/preference for quacks

The result of the study revealed that one of the factors impeding CHSD was the inability of the community members to seek health advice from experts; poor health-seeking behaviour, quack patronage, the tendency to receive services from people that are proximal to their homes and people they know rather than professionals; and the inability to go to the hospital on time to access care until the illness worsened. One of the respondents during the interview said:

That has been a challenge, honestly, we need to work on that actually. Even at that, people are still patronizing the quack…There is a PHC there, but they prefer to go to the quack and to the TBAs to deliver... [civil servant, Anambra, IDI].

In Akwa-Ibom, a healthcare provider noted that, after visiting a quack, the patients would then come to them when the illness got worse and the quack could no longer handle it. Below is an excerpt from the interview with the respondent.

They go to Chemist and treatment will fail, then they return to us. Some go to the Chemist with the name of the drugs and the chemist will hardly ask them questions [officer-in-charge1, Akwa Ibom].

- Male dominance

Male dominance was found to be a problem, especially in Kano. This factor involved males refusing to comply with health workers/providers in the community. These males were also found to prevent their wives from receiving care such as going for antenatal and having their children immunized. A respondent in Kano elucidated this problem when she noted:

The main problem is noncompliance from the men in the community, in many cases, the women give their full support to us but their husbands prevent them from attending ante-natal or accepting immunizations for their babies [TBA, Kano].

Community/facility level

- Superstitious/cultural belief

The results also revealed that superstitious belief/cultural belief was a factor impeding CHSD at this level. The belief was found to revolve around local and religious perceptions about different aspects of health such as birthing and illnesses. These beliefs were observed to cut across societal spiritual stereotypes attached to health, political and fetish interferences and lack of community awareness. This belief was captured by one of the respondents during the interview in Akwa-Ibom when the respondent said:

You know our people believe prophesy, that woman can see well if the person will not be able to deliver, she used to pray, so many TBAs have prayer houses which our women can live there for 1 month before the delivery time [officer-in-charge1, Akwa Ibom]

While reacting to the issue of the cultural belief, a respondent in Anambra also noted:

Again, is what people say about ntutu (a native malicious charm characterized by the mysterious injection of tiny metal pin-like objects into the victim's body) – all these things contribute to the disruption of healthcare. Because when someone has serious typhoid and malaria, or serious illness inside

the person, the person will focus on going to remove the ntutu. By the time they will come to hospital, things have gotten worst" [public servant, Anambra].

- Poor attitude of facility workers

Another factor we found to be constraining service delivery in the communities at this level is the poor attitude of the formal providers in the facility which is mostly reflected in absenteeism. This was elucidated by a community leader in Anambra when he noted:

When you get there, you will only see a nurse there and the doctor might be working in Awka. He won't be coming all the time. When you get there the nurse will be giving you first aid treatment while waiting for the doctor. Will you say that they are not there? The nurse will press you water while you wait for the doctor and the doctor might end up not coming that day while the person keep waiting. So that is the challenge [community leader, Anambra].

During an FGD in Akwa Ibom, a respondent also noted:

This patronage to PMVs happen because there aren't enough workers at the health centres and the health centers are closed early or not even open sometimes, especially during weekends. Most people use the PMVs and TBAs when they have no other option because there aren't enough workers at the health center. This means that there should be enough staff at the health center and people will see reasons to visit the health center instead of using the PMVs [trader, Akwa Ibom].

Governmental level

- Lack of adequate financial support from the government

The result revealed that one of the major factors constraining health service delivery was the lack of adequate financial support for healthcare providers to carry out their activities. This lack of funds was, for example, seen in poor remuneration for the field workers, the problem of owing health workers by the government, delay in payment of monthly salary, lack of funds for nutrition officers, lack of a Community-based Management of Acute Malnutrition (CMAM) centre in Akwa Ibom where acute malnutrition can be managed, etc. One of the respondents in Kano while trying to buttress the issue noted:

Yes, our biggest challenge is finance. We have the zeal to do many things but our constraint is finance. We are able to achieve some of our aims...the biggest challenge we face so far is lack of financial support from the government [WDC Member, Kano, IDI].

Another respondent in Anambra also noted:

Our major challenge has been lacking the funds to carry out some of the activities we want to do [chief security officer, Anambra].

The lack of financial support was also seen to affect the availability of cash to pay volunteers adequately, which also caused setbacks; this problem was captured by a respondent in Anambra:

The meagre amount paid to the volunteers is a serious setback… [volunteer health worker, Anambra,

- Embezzlement of funds

Another major problem we found in the study constraining CHSD at the governmental level was the embezzlement of funds budgeted for healthcare in the communities. This corrupt practice cuts across the whole health system down to government officials and elites in society. To elucidate this problem, a formal provider in Anambra noted that:

There was one man that came here, that time was like they are doing sickle cell program for the State. It is government-funded or foreign government-funded. During the Mr. X's governorship regime, they brought the money, but a sitting government official took it [medical doctor, NGO, Anambra].

- Lack of social amenities

From the result, we found that another governmental-level factor limiting the progress of community health service delivery is the lack of social amenities in the communities such as water, electricity, security, adequate living quarters for healthcare workers, etc. The lack of electricity was emphasized, as it prevents pregnant women from accessing the healthcare centre at night. An example of how this constrains service delivery was captured by one of the respondents during the interview in Kano:

These sectors can because if there is no water in the hospital, there is a big problem, you see, water is very important because whatever that you are going to take, you have to use water, in conducting delivery, in the lab, because you have to wash some items before use or after use, in the hospital environment even the toilet, the staff toilet, outpatient toilet, eve-

rything, you have to use water. Water is very essential for the community health [matron, Kano, IDI].

While reacting to the issue of security, a respondent in Akwa Ibom noted:

But the fear is when you do all these things without security, something can happen cos when I came in here. I had a little experience, thieves came and removed all the fans that were here, about 8 fans, and picked all the drugs [officer-in-charge2, Akwa Ibom].

The lack of accommodation or living quarters inside the healthcare facilities for healthcare workers was also buttressed by another respondent in Akwa Ibom:

...but we are still praying that one faithful day, those ones they have not been giving us, they will give, because here now, we are supposed to have a quarters... one thing is the quarters here, the space is very big, they supposed to build quarters here and they are complaining, they supposed to build quarters, the community gave the government this land to build of which they have not [officer-in-charge1, Akwa Ibom, IDI].

- Poor data record/data management

The result also revealed that the problem with health data collection and management was another factor constraining CHSD by affecting the utilization of health data for planning and decision-making. This problem was found to accrue from limited human resources and lack of training of data officers by the government. In a bid to elucidate this problem, a respondent said:

We have issue with data collection because we don't have enough human resources for health. So, data collection has been a problem. You know, they are trying, but need training. At times, they lack the tools to collect data, but we are trying to address it. If we have enough human resources for health, we will deploy them to these facilities to help to generate every data and assign that role to them [civil servant, Anambra, IDI].

Result summary Table 2 presents the identified factors enhancing CHSD in the communities respectively at individual, community/facility and governmental levels. Table 2 presents a summary of identified factors constraining CHSD in the communities respectively at individual, community/facility and governmental levels.

Discussion

The findings that, although CHSD within Nigerian communities is plagued with multi-level challenges, there are also multi-level factors playing roles in enhancing CHSD underscores the point that efforts are still being made to ensure an improved CHSD within the communities at different levels. These efforts were seen predominantly at the individual level, which highlights the power community members wield in improving healthcare in their communities rather than waiting on others, thus, highlighting the imperative role of community participation as noted in a recent study [23].

The synergy between formal and informal providers was found to be a key factor in enhancing CHSD both at individual and community/facility levels. This finding further supports the importance of ensuring a sustained healthy relationship between the informal and formal healthcare providers in ensuring improved healthcare service provision in communities as previously emphasized by other researchers [24, 34]. Furthermore, at the community and facility level, support from community-based organizations (CBOs) was found as an enabler, as has been also identified in Nepal, although these were challenged by weak governance [31], and in China, where

Table 2 Summary table of enhancing and constraining factors of CHSD

Individual level	Community/facility level	Governmental level
Enhancing factors		
• Selfless participation of community members • The synergy between formal and informal providers with community members • Compassionate attitude of informal providers	• Synergy between formal and informal providers • Support from community-based organizations and structures	• Government/partner NGOs support to community-based formal and informal providers • A clear line of communication
Constraining factors		
• Poor health-seeking behaviours/preference for quacks • Male dominance	• Superstitious/cultural belief • Poor attitude of facility workers	• Lack of adequate financial support from the government • Embezzlement of funds • Lack of social amenities • Poor data record/data management

a community delivery model based on community structures was found to improved user satisfaction [32].

At the governmental level, NGOs partnering with the government to support formal and informal providers in the communities were also seen to help improve health service delivery in the communities. This finding further supports the findings of [35] that NGOs play a vital role in strengthening healthcare service delivery in low- and middle-income countries around the world.

The results are also consistent with the work of other researchers within Nigeria. For example, the current study supports the findings from the works of Amedari and Ejidike [18], Obansa and Orimisan [19], Okereke et al. [13] and Welcome [20], which identified factors constraining health service delivery in Nigerian communities as centring on corruption across the health system, poor management of human resources and lack of funding from the government. This raises the concern that these problems may have lingered because of negligence or enough not being done to curtail it by relevant stakeholders, hence pointing to the urgent need to create more awareness of the dangers of these constraining factors on CHSD and CHS as well as calling for more concerted effort to address these challenges. This also highlights the need for the possible adoption of a different approach to addressing these challenges. One such different approach could be the exploration of a joint regional effort from African leaders to effectively address these challenges since some of the factors found to impede CHSD within Nigeria such as lack of funding and basic amenities from the government are also those reported by the Nigerian National Population Commission [17] to affect healthcare service delivery in other African countries.

Although there are multi-level factors identified to be impeding CHSD in Nigeria by the present study, the majority of the factors were identified to stem from the governmental level. Interestingly, these challenges lead to others, indicating that successful eradication of a challenge can resolve other challenges. For example, the lack of adequate financial support, embezzlement of funds, lack of social amenities and poor data management were among the factors found to be impeding the progress of health services in the communities. By adequately addressing the issue of embezzlement of public funds, the issues of inadequate financial support, lack of amenities and poor data management can invariably be resolved to a reasonable extent; this is because the reason for the lack of social amenities, data management and other financial support could be because the funds provided for such are embezzled or mismanaged. Therefore, by setting up functional accountability structures involving the community members where every fund coming into the communities for health be it as a donation or government funding is accounted for, there is a possibility that this will also increase community participation in health as well as enable the communities to serve as "accountability police" for health projects, thus ensuring that funds are efficiently utilized in the execution and delivery of community health services.

The poor attitude of healthcare facility workers in Nigeria especially in the form of absenteeism has been reported by studies to be a cog in the wheel of development for CHSD in Nigeria [25, 26]; our study finding was able to validate this by indicating that this facility-level constraint is still a key factor impeding the progress of CHSD in Nigerian communities. According to these studies [25, 26], absenteeism is fueled by the government's inability to provide adequate human resources in health facilities. This highlights the interrelatedness of the constraining factors across different levels in the current study. Furthermore, the unavailability of healthcare workers in the facility (a facility-level factor) may in turn explain why community members prefer to seek care among quacks (an individual-level factor) since these quacks are more proximal, are easy to access and affordable and easily share the same cultural preferences and beliefs with the community members [27–29].

Our study also revealed that cultural/superstitious beliefs negatively impact community health service delivery and consequently the community health systems in Nigeria. The influence of sociocultural factors on healthcare service delivery in Nigeria has been long documented by Odebiyi [30]. These cultural/superstitious beliefs (a community-level factor) may also explain the refusal of males to let their wives go for antenatal and immunization services, which the current study identified as a constraining factor at the individual level.

The interrelated nature of these constraining factors across the levels and the over-dependence on the government to tackle these challenges alone may explain why these factors have lingered. Therefore, involving more hands was seen as a key solution. The introduction of a multi-sectoral action where different health and non-health sectors can collectively work towards addressing these challenges at various levels may be more effective than expecting the government to do it alone. Since these challenges occur at different levels, different sectors that function at each level can focus on addressing challenges within their operational level first, before tackling them at a broader level. Evidence [21, 22] has also shown that multi-sectorial collaboration is an effective approach to addressing different health challenges.

Limitation of study

Our study was not able to cover more states in the geopolitical zones already covered as well as new geopolitical zones in Nigeria such as Southwest due to limited resources.

Conclusion and recommendations

Achieving an enhanced CHS is possible. However, this is largely dependent on how well actors in both health and non-health sectors prioritize and adequately address the multi-level challenges constraining CHSD while sustaining the factors that promote it. CHSD through functional CHS can help improve strengthening of overall health systems and lead to improved health at the community level while ensuring the achievement of universal health coverage. Decision-makers should integrate CHSD in all program implementation that involves communities and ultimately work with CHS as a veritable platform for effective health service delivery.

Since the findings show that efforts are being made to improve community healthcare service delivery, the underlying argument therefore could be that these efforts are not substantial enough to produce the significant output needed for an optimal CHSD within the communities. This draws attention to the need for a joint approach that ensures the sustenance of the enabling factors while simultaneously addressing the identified challenges to boost the effort.

Also, it is possible that identifying and rewarding exceptional community actors that contribute to improving health service delivery in the communities by the leaders of the community and other stakeholders can encourage the sustenance of the identified enabling factors, especially at the individual level since studies have shown that reinforcements can help sustain positive attitudes [14–16].

Abbreviations

CHS	Community health system
CHSD	Community health service delivery
TBAs	Traditional birth attendants
IDI	In-depth interview
OIC	Officer-in-charge
CMAM	Community-based management of acute malnutrition
FGD	Focus group discussion
PMVs	Patent medicine vendors
UHC	Universal health coverage
SDGs	Sustainable Development Goals
PHC	Primary healthcare
CSOs	Civil society organizations
NGOs	Non-governmental organizations
LGA	Local government area
CVs	Community volunteers
FBOs	Faith-based organizations
WDC	Ward development committee
HFCs	Health facility committees
IHW	Informal health worker
VCM	Volunteer community mobilizer

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Author contributions

Enyi Etiaba and Obinna Onwujekwe conceptualized and designed the study. Okechukwu Ozor and Enyi Etiaba participated in data collection. All authors took part in data analysis. Okechukwu Ozor wrote the first draft of the manuscript. All authors reviewed and approved the final version of the manuscript.

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Availability of data and materials

The dataset used for this study is available and can be obtained from the corresponding author upon request. No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

This study received ethics approval from the Health Research Ethics Committee of the University of Nigeria Teaching Hospital Enugu with reference number NHRECAS/01/2008-WA00002458-IRB00002323. All methods were conducted according to relevant guidelines and regulations. All participants were informed of the purpose of the research, the rights of participants and measures to protect them and their data. Written, signed and verbal informed consent was also obtained from all the participants. Participation in the study was voluntary and confidentiality was ensured.

Consent for publication

Not Applicable.

Competing interest

There is no competing interest. We confirm that the manuscript has been read and approved by all named authors. We confirm that the order of authors listed in the manuscript has been approved by all named authors.

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